Report Number:	R14634918-E11
Issue Date:	2023-03-08
FCC ID:	PY7-12907W

Electromagnetic Compatibility Test Report

For

Sony Corporation
1-7-1 Konan Minato-ku
Tokyo, 108-0075, Japan

CERT #0751.06

TEST REPORT DETAILS

Tests Performed By:	UL LLC 12 LABORATORY DR. RESEARCH TRIANGLE PARK, NC 27709, U.S.A.
Tests Performed For:	Sony Corporation 1-7-1 Konan Minato-ku Tokyo, 108-0075, Japan
Issue Date:	2023-03-08
FCC ID:	PY7-12907W
Sample Serial Number:	QV77002NFN, QV7700EYFN
Applicable Standards:	FCC 47 CFR PART 15 SUBPART B:2023
Date Test Item Received:	2023-01-20
Testing Start Date:	2023-01-24
Date Testing Complete:	2023-02-09
Overall Results:	Compliant

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by a2La, NIST, or any agency of the U.S. government.

REPORT DIRECTORY

REPORT REVISION HISTORY

Revision Date	Revision Version	Description	Revised By	Revision Reviewed By
2023-03-02	V1	Initial Issue	N. Bennett	M. Antola
2023-03-08	V2	TCB Feedback Addressed.	N. Bennett	M. Antola

1.0 TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4:2014.

1.1 Deviations from standard test methods

None

1.2 Device Modifications Necessary for Compliance

None

1.3 TEST RESULTS SUMMARY

This product is considered Class B

Requirement – Test	Result (Compliant / Non-Compliant)
CONDUCTED EMISSIONS	Compliant
RADIATED EMISSIONS	Compliant

Approved & Released For
UL LLC. By:

Michael Antola
Staff Engineer
Consumer Technology Division
UL LLC.

Prepared By:

Noah Bennett
Electrical Engineer
Consumer Technology Division
UL LLC.

2.0 DECISION RULES AND MEASUREMENT UNCERTAINTY

2.1 Metrological Traceability

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards

2.2 Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement).

2.3 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	U_{lab}
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 db
Worst Case Radiated Disturbance, All ranges	6.01 db

Uncertainty figures are valid to a confidence level of 95%.

2.4 Sample Calculation

RADIATED EMISSIONS
Where relevant, the following sample calculation is provided:
Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

MAINS CONDUCTED EMISSIONS
Where relevant, the following sample calculation is provided:
Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.

36.5 dBuV + 0 dB +10.1 dB+ 0 dB = 46.6 dBuV

3.0 GENERAL - Product Description

3.1 Equipment Description

GSM/WCDMA/LTE/5G Phone with BT, DTS/UNII a/b/g/n/ac/ax, GPS, WPT & NFC

3.2 Device Configuration During Test

3.2.1 Equipment Used During Test:

Use	Product Type	Manufacturer	Model	Comments
EUT	Cell phone	Sony	PY7-12907W	None
AE	Headphones	Sony	MDR-EX15AP	None
AE	Power Supply	Sony	XQZ-UC1	None
AE	Laptop	HP	11-ah112dx	Used for PC peripheral setup
AE	Power Supply	HP	TPN-CA14	Used for PC peripheral setup
AE	Monitor	ViewSonic	VS15562	Used for PC peripheral setup
AE	Mouse	Logitech	B100	Used for PC peripheral setup
Note: **EUT** - Equipment Under Test, **AE** - Auxiliary/Associated Equipment, or **SIM** - Simulator (Not Subjected to Test)				

3.2.2 Input/Output Ports:

Port #	Name	Type*	Cable Max. >3m (Y/N)	Cable Shielded (Y/N)	Comments
0	Enclosure	N/E	—	—	None
1	USB	DC	N	N	Connected to power supply/laptop
2	Audio	I/O	N	N	Connected to headphones
3	HDMI	I/O	N	N	Connected to monitor for support laptop population
4	Audio	I/O	N	N	Connected to monitor for support laptop population
5	Mains	I/O	N	N	Connected to support laptop power supply
*Note: AC = AC Power Port DC = DC Power Port N/E = Non-Electrical I/O = Signal Input or Output Port (Not Involved in Process Control) TP = Telecommunication Ports					

3.2.3 EUT Highest Frequencies:

Frequency (MHz)	Description
5825	Highest Tx Frequency

3.2.4 Power Interface:

Mode # /Rated	Voltage (V)	Current (A)	Power (W)	Frequency (DC/AC-Hz)	Phases (#)	Comments
Rated	100-240	-	-	50/60	Single	None
1	120Vac	-	-	60Hz	Single	Power Supply
2	4.28Vdc	-	-	DC	Single	Battery

3.2.5 Subassemblies

Description	Manufacturer	Model
None		

3.2.6 Manufacturer's Description of Model Differences

None

3.2.7 Software and Firmware

The software installed during testing was 0.94 for idle sample and 0.81 for WWAN Rx sample.

3.3 Block Diagram

Refer to setup exhibit R14634918-EP11 for block diagram.

3.4 EUT Configurations

Configuration #	Description
1	Configured as table top equipment

3.5 EUT Operation Modes

Mode of Operation#	Description
1	Operating as intended on battery. Radio idle.
2	Operating as intended connected to power supply. Radio idle.
3	Operating as intended connected to power supply. Radio in Rx mode on supported LTE bands that transmit <960MHz. Note: LTE B5 covers GSM850, WCDMA Band 5 and FR1 n5. Callbox was used to ensure that EUT was placed in Rx mode.
4	Operating as intended connected as PC Peripheral. Radio idle.

Supported Band(s)	Down Link Frequency Range (MHz)
GSM850, WCDMA 5, LTE B5m FR1 n5	869-894
LTE B12	729-746
LTE B13	746-756

3.6 Rationale for EUT Configurations

Configuration #	Description
1	EUT was investigated in three orientations, X, Y, and Z. It was determined that worst-case orientation for radiated testing was Y for both battery and X for AC power supply/PC Peripheral modes.

3.7 Rationale for EUT Mode of Operation

Mode of Operation #	Description
1,2,3,4	EUT capable of operating on battery, connected to power supply, or connected as PC peripheral.

4.0 APPLICABLE EMISSIONS LIMITS AND TEST RESULTS

4.1 Test Conditions and Results - MAINS TERMINAL - CONDUCTED EMISSIONS

Test Engineer	27465/46722	
Test Date	2023-01-24 and 2023-02-09	
Laboratory Parameters	Required prior to the test	During the test
Ambient Temperature	10 to 40 °C	26.0 °C; 22.1 °C
Humidity	10 % to 90 %	21.2%; 38.2%
	Frequency range on each side of line	Measurement Point
Fully configured sample scanned over the following frequency range	150kHz to 30MHz	Mains

Limits - Class B

Frequency (MHz)	Limit (dBµV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

Supplementary information: None

Conducted Emissions EUT Configuration Settings

Power Interface #	EUT Configurations #	EUT Mode of Operation#
1	1	2,4

Supplementary information: **EUT S/N: QV77002NFN was used.**

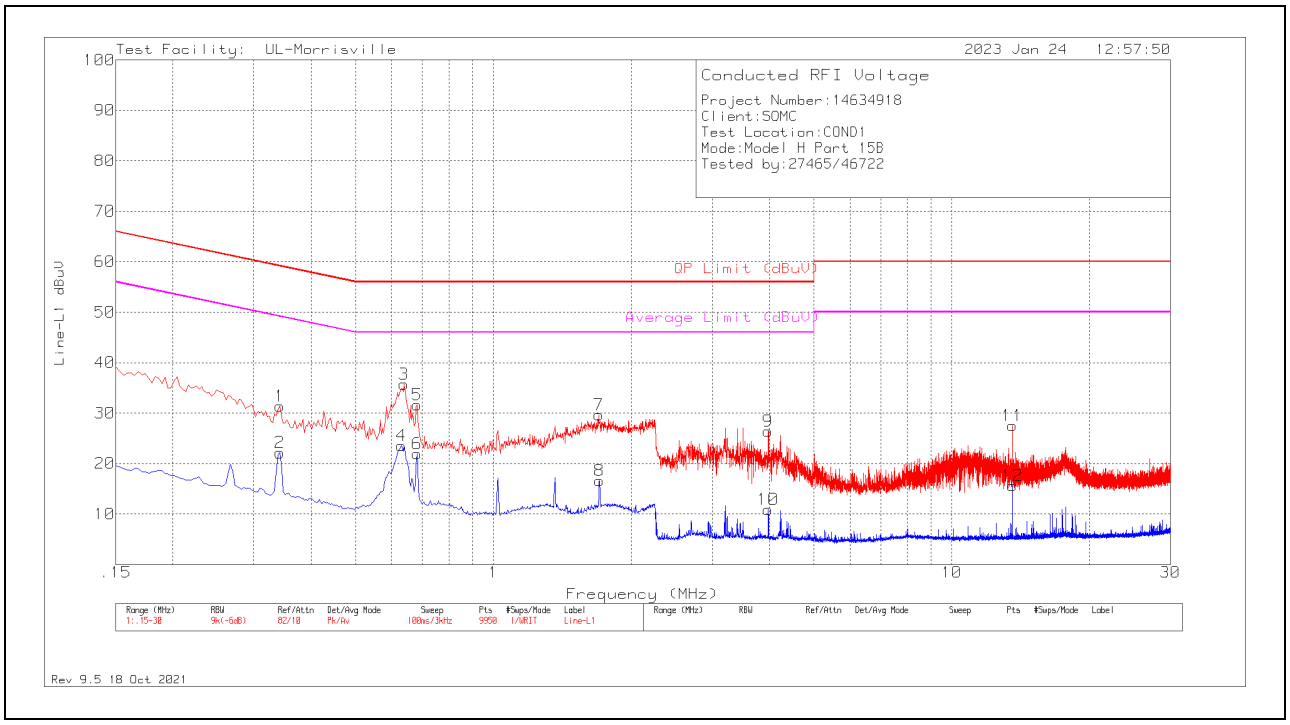
Refer to setup exhibit R14634918-EP11 for setup photos.

Conducted Emissions Test Equipment

Test Equipment Used - Line-Conducted Emissions – Voltage (Morrisville – Conducted 1)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
CBL087	Coax cable, RG223, N-male to BNC-male, 20-ft.	Pasternack	PE3W06143-240	2022-04-05	2023-04-05
HI0091	Environmental Meter	Fisher Scientific	15-077-963	2022-07-20	2023-07-20
LISN001	LISN, 50-ohm/50-uH, 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50-25-2-01-550V	2022-08-01	2023-08-01
75141	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2022-08-03	2023-08-03
ATA222	Transient Limiter, 0.009-100MHz	Electro-Metrics	EM-7600	2022-04-05	2023-04-05
PS214	AC Power Source	Elgar	CW2501M (s/n 1523A02396)	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
	Miscellaneous (if needed)				
LISN008	LISN, 50-ohm/50-uH, 2-conductor, 25A (For support gear only.)	Solar Electronics	8012-50-R-24-BNC	NA	NA

Conducted Emissions Graph – Power Supply Line 1

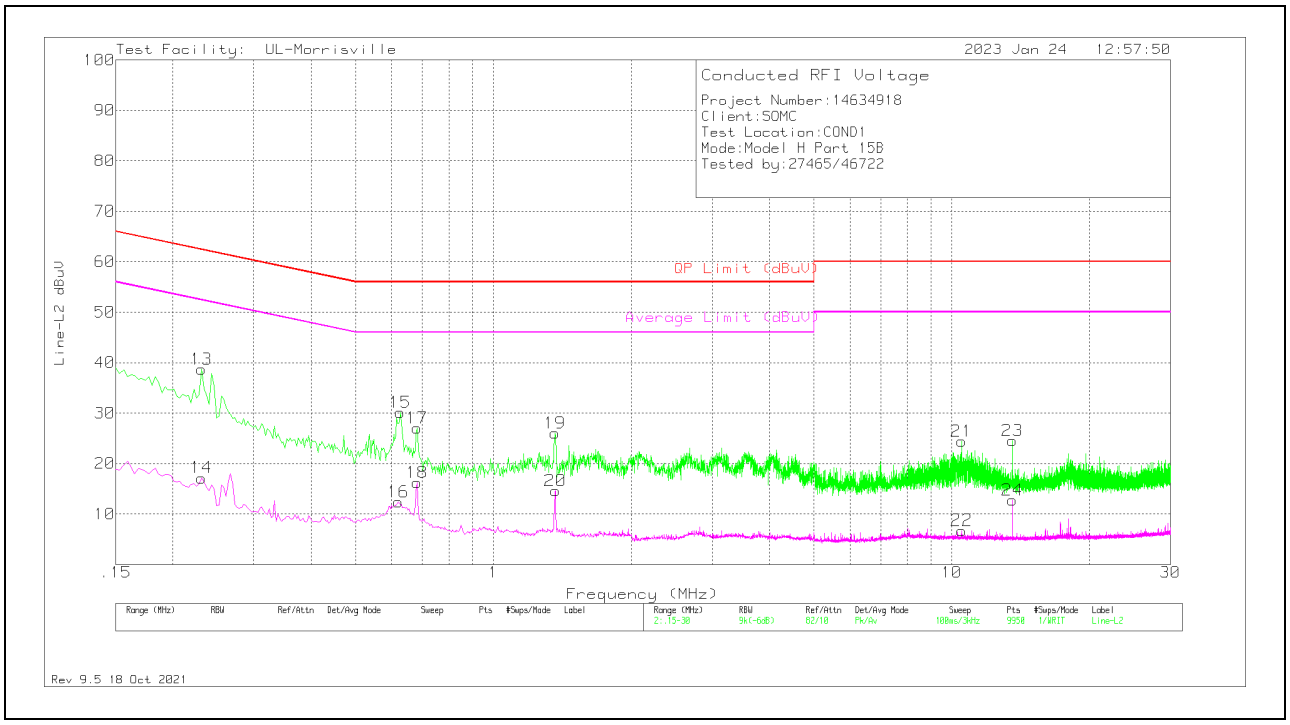


Conducted Emissions Data Points – Power Supply Line 1

Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
1	.342	21.53	Pk	.1	9.8	31.43	59.15	-27.72	-	-
2	.342	12.23	Av	.1	9.8	22.13	-	-	49.15	-27.02
3	.639	25.97	Pk	0	9.8	35.77	56	-20.23	-	-
4	.63	13.8	Av	0	9.8	23.6	-	-	46	-22.4
5	.681	21.85	Pk	0	9.8	31.65	56	-24.35	-	-
6	.681	12.16	Av	0	9.8	21.96	-	-	46	-24.04
7	1.698	19.88	Pk	0	9.8	29.68	56	-26.32	-	-
8	1.704	6.78	Av	0	9.8	16.58	-	-	46	-29.42
9	3.978	16.51	Pk	0	9.9	26.41	56	-29.59	-	-
10	3.978	1.02	Av	0	9.9	10.92	-	-	46	-35.08
11	13.56	17.43	Pk	.1	10	27.53	60	-32.47	-	-
12	13.56	5.47	Av	.1	10	15.57	-	-	50	-34.43

Pk - Peak detector
Av - Average detection

Conducted Emissions Graph – Power Supply Line 2

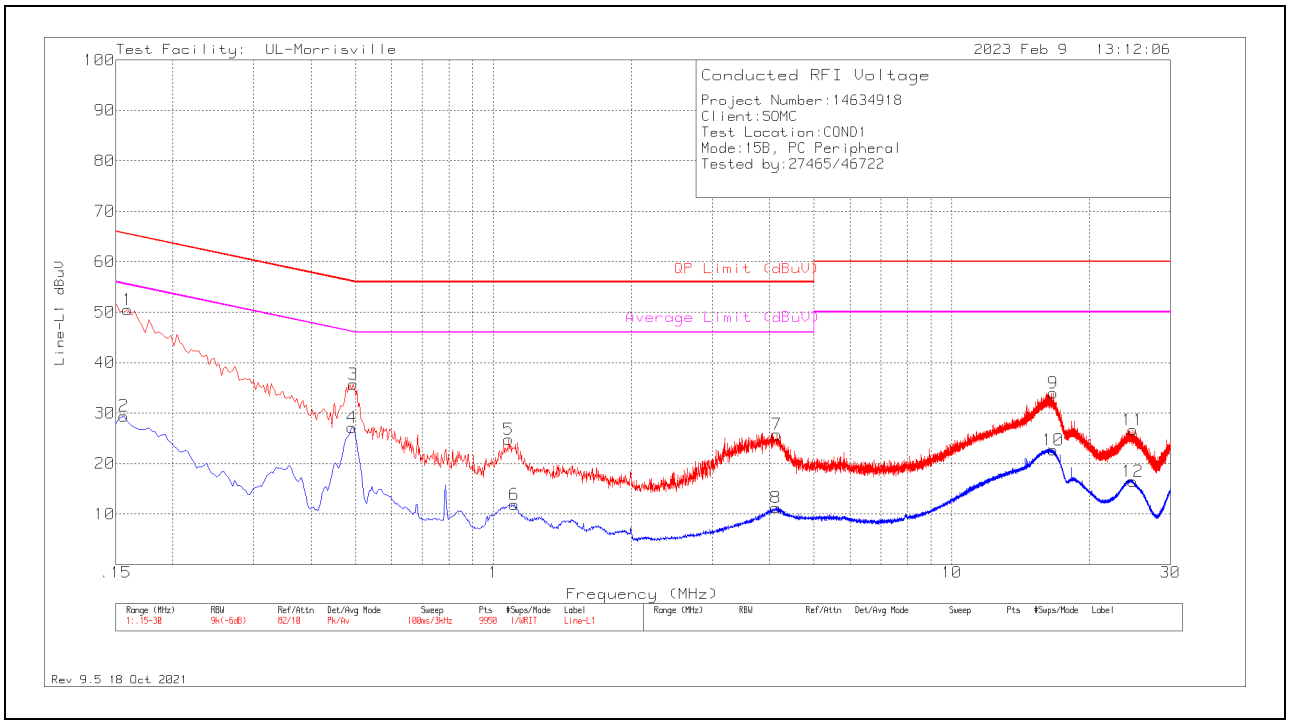


Conducted Emissions Data Points – Power Supply Line 2

Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
13	.231	28.79	Pk	.1	9.8	38.69	62.41	-23.72	-	-
14	.231	7.26	Av	.1	9.8	17.16	-	-	52.41	-35.25
15	.627	20.33	Pk	0	9.8	30.13	56	-25.87	-	-
16	.621	2.6	Av	0	9.8	12.4	-	-	46	-33.6
17	.681	17.27	Pk	0	9.8	27.07	56	-28.93	-	-
18	.681	6.39	Av	0	9.8	16.19	-	-	46	-29.81
19	1.362	16.23	Pk	0	9.8	26.03	56	-29.97	-	-
20	1.365	4.85	Av	0	9.8	14.65	-	-	46	-31.35
21	10.5	14.27	Pk	.1	10	24.37	60	-35.63	-	-
22	10.5	-3.37	Av	.1	10	6.73	-	-	50	-43.27
23	13.56	14.4	Pk	.1	10	24.5	60	-35.50	-	-
24	13.56	2.61	Av	.1	10	12.71	-	-	50	-37.29

Pk - Peak detector
Av - Average detection

Conducted Emissions Graph – PC Peripheral Line 1

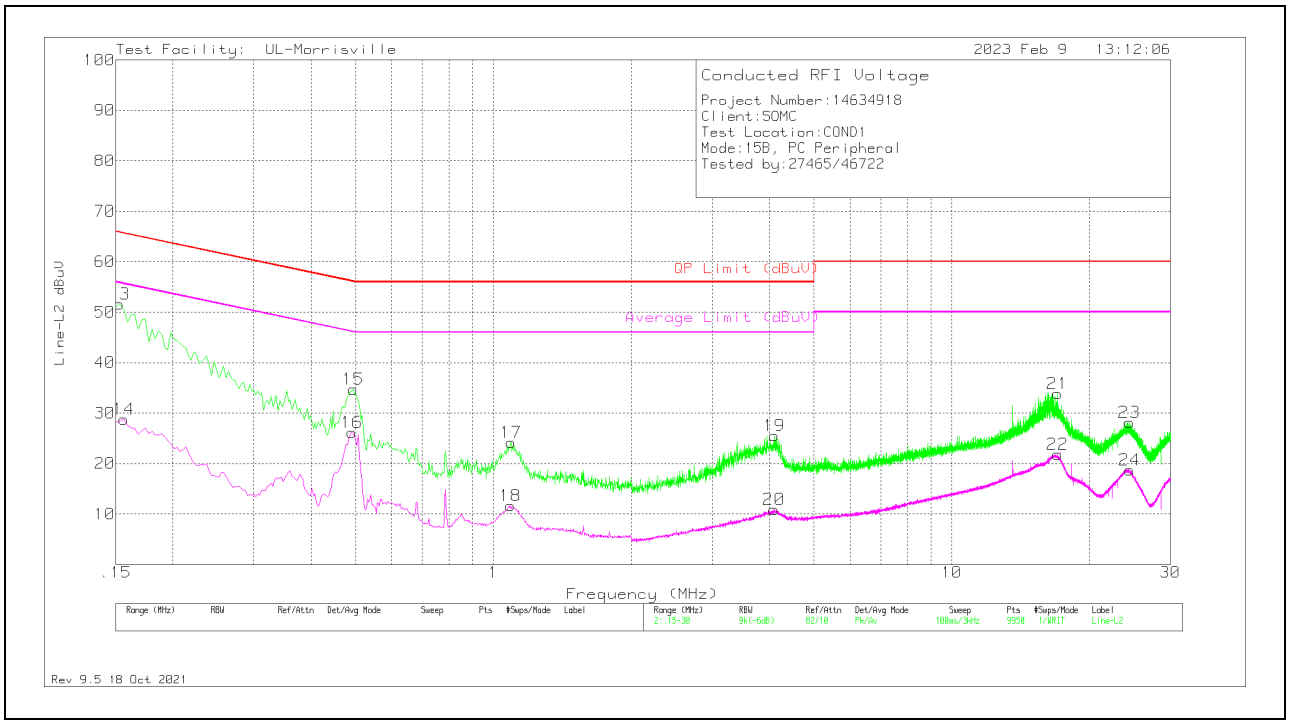


Conducted Emissions Data Points – PC Peripheral Line 1

Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
1	.159	40.48	Pk	.2	9.8	50.48	65.52	-15.04	-	-
2	.156	19.45	Av	.2	9.8	29.45	-	-	55.67	-26.22
3	.495	25.87	Pk	0	9.8	35.67	56.08	-20.41	-	-
4	.492	17.31	Av	0	9.8	27.11	-	-	46.13	-19.02
5	1.08	14.94	Pk	0	9.8	24.74	56	-31.26	-	-
6	1.11	2.09	Av	0	9.8	11.89	-	-	46	-34.11
7	4.155	15.83	Pk	0	9.9	25.73	56	-30.27	-	-
8	4.134	1.4	Av	0	9.9	11.3	-	-	46	-34.7
9	16.659	23.83	Pk	.1	10.1	34.03	60	-25.97	-	-
10	16.638	12.48	Av	.1	10.1	22.68	-	-	50	-27.32
11	24.87	16.28	Pk	.2	10.2	26.68	60	-33.32	-	-
12	24.849	6.05	Av	.2	10.2	16.45	-	-	50	-33.55

Pk - Peak detector
Av - Average detection

Conducted Emissions Graph – PC Peripheral Line 2



Conducted Emissions Data Points – PC Peripheral Line 2

Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
13	.153	41.61	Pk	.2	9.8	51.61	65.84	-14.23	-	-
14	.156	18.75	Av	.2	9.8	28.75	-	-	55.67	-26.92
15	.495	24.88	Pk	0	9.8	34.68	56.08	-21.4	-	-
16	.492	16.36	Av	0	9.8	26.16	-	-	46.13	-19.97
17	1.092	14.42	Pk	0	9.8	24.22	56	-31.78	-	-
18	1.089	1.8	Av	0	9.8	11.6	-	-	46	-34.4
19	4.107	15.64	Pk	0	9.9	25.54	56	-30.46	-	-
20	4.095	.97	Av	0	9.9	10.87	-	-	46	-35.13
21	17.025	23.66	Pk	.1	10.1	33.86	60	-26.14	-	-
22	17.01	11.61	Av	.1	10.1	21.81	-	-	50	-28.19
23	24.408	17.8	Pk	.2	10.2	28.2	60	-31.8	-	-
24	24.414	8.27	Av	.2	10.2	18.67	-	-	50	-31.33

Pk - Peak detector
Av - Average detection

4.2 Test Conditions and Results - RADIATED EMISSIONS

Test Engineer	28100/11993; 86158/11993; 19289/11993	
Test Date	2023-02-01 to 2023-02-09	
Laboratory Parameters	Required prior to the test	During the test
Ambient Temperature	10 to 40 °C	22.1 °C - 24.8°C
Humidity	10 % to 90 %	30.6 %- 40.3 %
	Frequency range	Measurement Point
Fully configured sample scanned over the following frequency range	30-40000MHz	3m

Limits - Class B		
Frequency (MHz)	Limit (dBµV/m)	
30-88	40	NA
88-216	43.5	NA
216-960	46	NA
Above 960	54	NA
	Peak	Average
Above 1 GHz	74	54
Supplementary information: none.		

Radiated Emissions EUT Configuration Settings

Power Interface #	EUT Configurations #	EUT Mode of Operation#
1,2	1	1,2,3,4
Supplementary information**: All testing done with EUT SN: QV7700EYFN**		

Refer to setup exhibit R14634918-EP11 for setup photos.

Radiated Emissions Test Equipment

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 2)

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
	30-1000 MHz				
AT0074	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2022-09-07	2023-09-07
	18-40 GHz				
204705	Horn Antenna, 26-40GHz	Com-Power	AH-640	2022-07-11	2023-07-11
	Gain-Loss Chains				
C2-SAC02	Gain-loss string: 25-1000MHz	Various	Various	2022-05-10	2023-05-10
C2-SAC04	Gain-loss string: 18-40GHz	Various	Various	2022-05-10	2023-05-10
	Receiver & Software				
197955	Spectrum Analyzer	Rohde & Schwarz	ESW44	2022-03-08	2023-03-08
SA0020	Spectrum Analyzer	Agilent	E4446A	2022-06-08	2023-06-08
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
	Additional Equipment used				
210642	Environmental Meter	Fisher Scientific	15-077-963 s/n 210701942	2021-08-16	2023-08-16
208720	Wideband Radio Communications Tester	Rohde and Schwarz	CMW500	2022-05-02	2023-05-02
208721	Wideband Radio Communications Tester	Rohde and Schwarz	CMW500	2022-05-05	2023-05-05

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 1)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	1-18 GHz				
AT0072	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2022-05-11	2023-05-11
	18-40 GHz				
204704	Horn Antenna, 18-26.5GHz	Com-Power	AH-626	2022-07-11	2023-07-11
204705	Horn Antenna, 26-40GHz	Com-Power	AH-640	2022-07-11	2023-07-11
	Gain-Loss Chains				
C1-SAC03	Gain-loss string: 1-18GHz	Various	Various	2022-12-02	2023-12-02
C1-SAC04	Gain-loss string: 18-40GHz	Various	Various	2022-05-05	2023-05-05
	Receiver & Software				
206496	Spectrum Analyzer	Rohde & Schwarz	ESW44	2022-02-15	2023-02-15
SA0020	Spectrum Analyzer	Agilent	E4446A	2022-06-08	2023-06-08
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
	Additional Equipment used				
200539	Environmental Meter	Fisher Scientific	15-077-963 s/n 18474341	2022-10-05	2023-10-05
PS214	AC Power Source	Elgar	CW2501M (s/n 1523A02396)	NA	NA

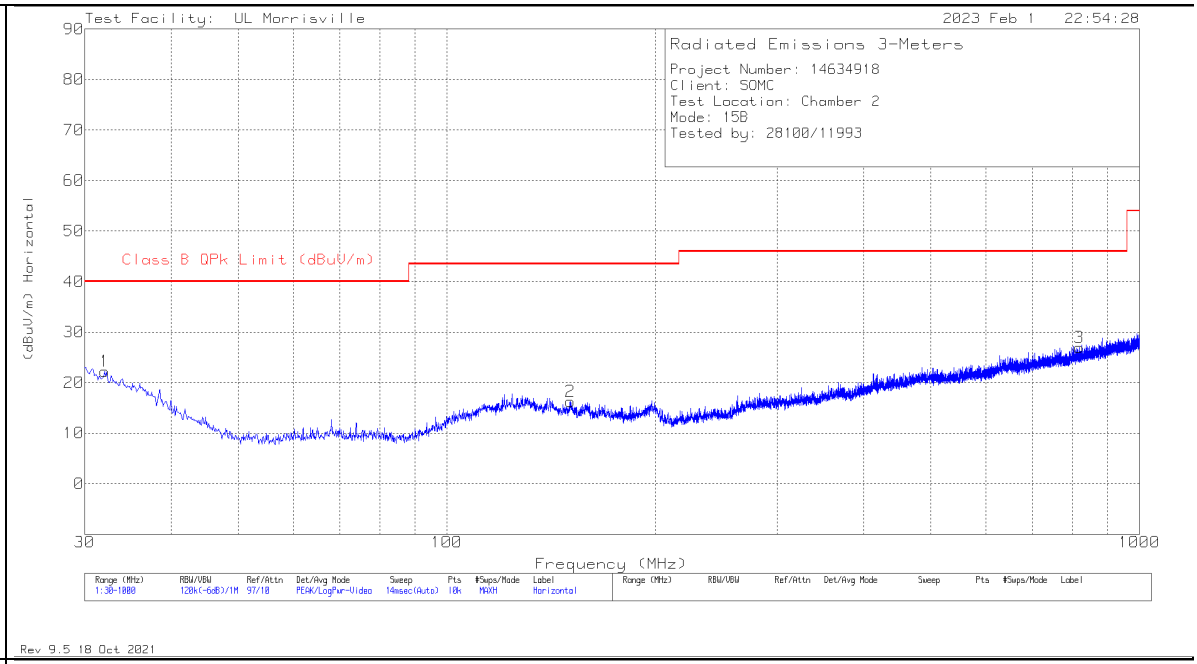
Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 4)

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
	30-1000 MHz				
90629 (AT0075)	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2023-01-06	2024-01-06
	1-18 GHz				
AT0067	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2022-05-24	2023-05-24
	18-40 GHz				
204704	Horn Antenna, 18-26.5GHz	Com-Power	AH-626	2022-07-11	2023-07-11
204705	Horn Antenna, 26-40GHz	Com-Power	AH-640	2022-07-11	2023-07-11
	Gain-Loss Chains				
C4-SAC02	Gain-loss string: 25-1000MHz	Various	Various	2022-05-20	2023-05-20
C4-SAC03	Gain-loss string: 1-18GHz	Various	Various	2022-05-20	2023-05-20
C4-SAC04	Gain-loss string: 18-40GHz	Various	Various	2022-10-12	2023-10-12
	Receiver & Software				
197254	Spectrum Analyzer	Rohde & Schwarz	ESW44	2023-02-02	2024-02-02
SA0020	Spectrum Analyzer	Agilent	E4446A	2022-06-08	2023-06-08
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
	Additional Equipment used				
21642	Environmental Meter	Fisher Scientific	15-077-963 (s/n 210701692)	2021-08-16	2023-08-16

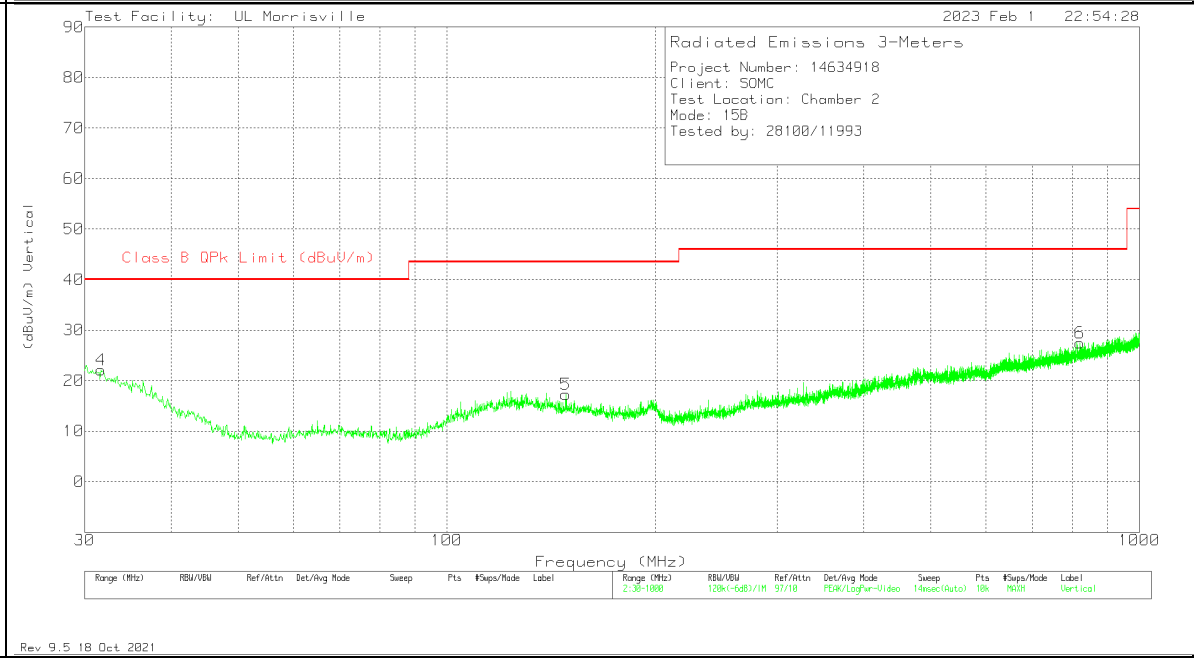
RADIATED EMISSIONS 30 TO 1000 MHz - Battery

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

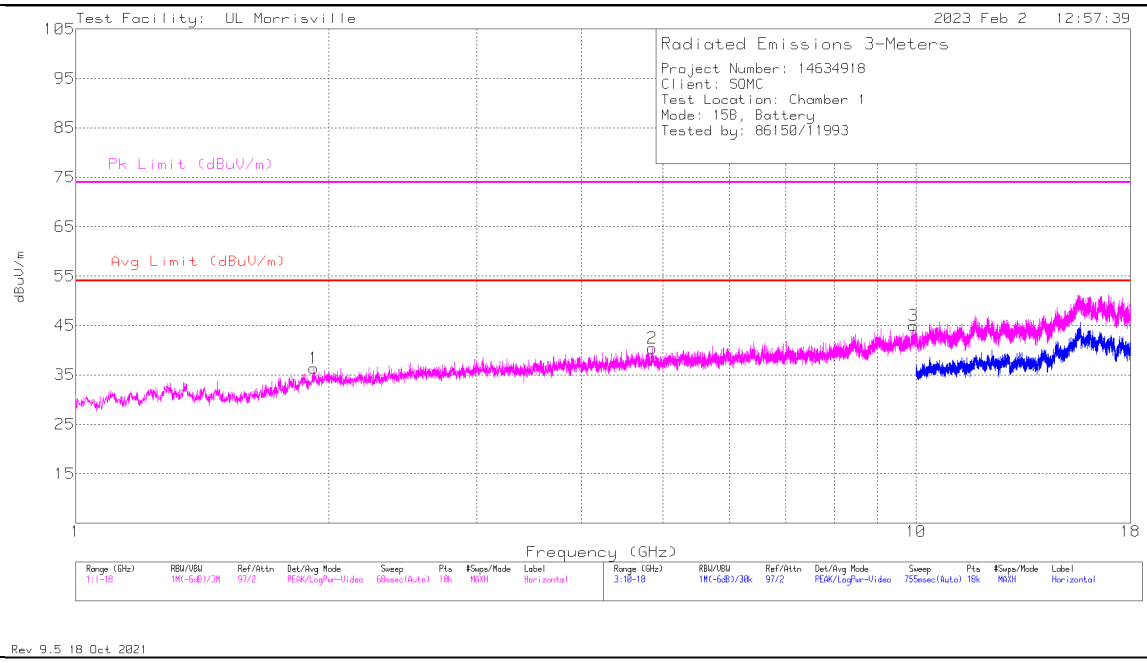
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0074 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	31.649	27.47	Pk	26.1	-31.5	22.07	40	-17.93	0-360	199	V
1	32.037	27.81	Pk	25.9	-31.5	22.21	40	-17.79	0-360	399	H
5	148.437	28.44	Pk	18.7	-29.9	17.24	43.52	-26.28	0-360	199	V
2	150.668	27.55	Pk	18.6	-29.9	16.25	43.52	-27.27	0-360	399	H
3	819.095	26	Pk	27.3	-26.3	27	46.02	-19.02	0-360	399	H
6	820.647	26.2	Pk	27.3	-26	27.5	46.02	-18.52	0-360	199	V

Pk - Peak detector

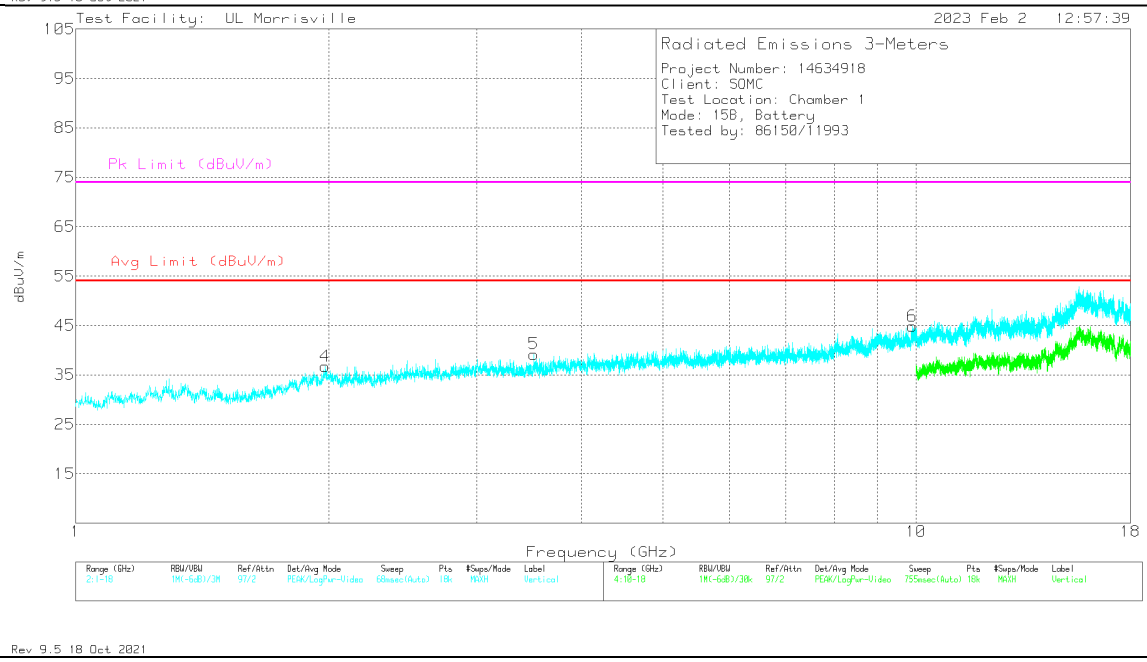
RADIATED EMISSIONS 1000 TO 18,000 MHz – Battery

Radiated Emissions Graph

HORIZONTAL



VERTICAL



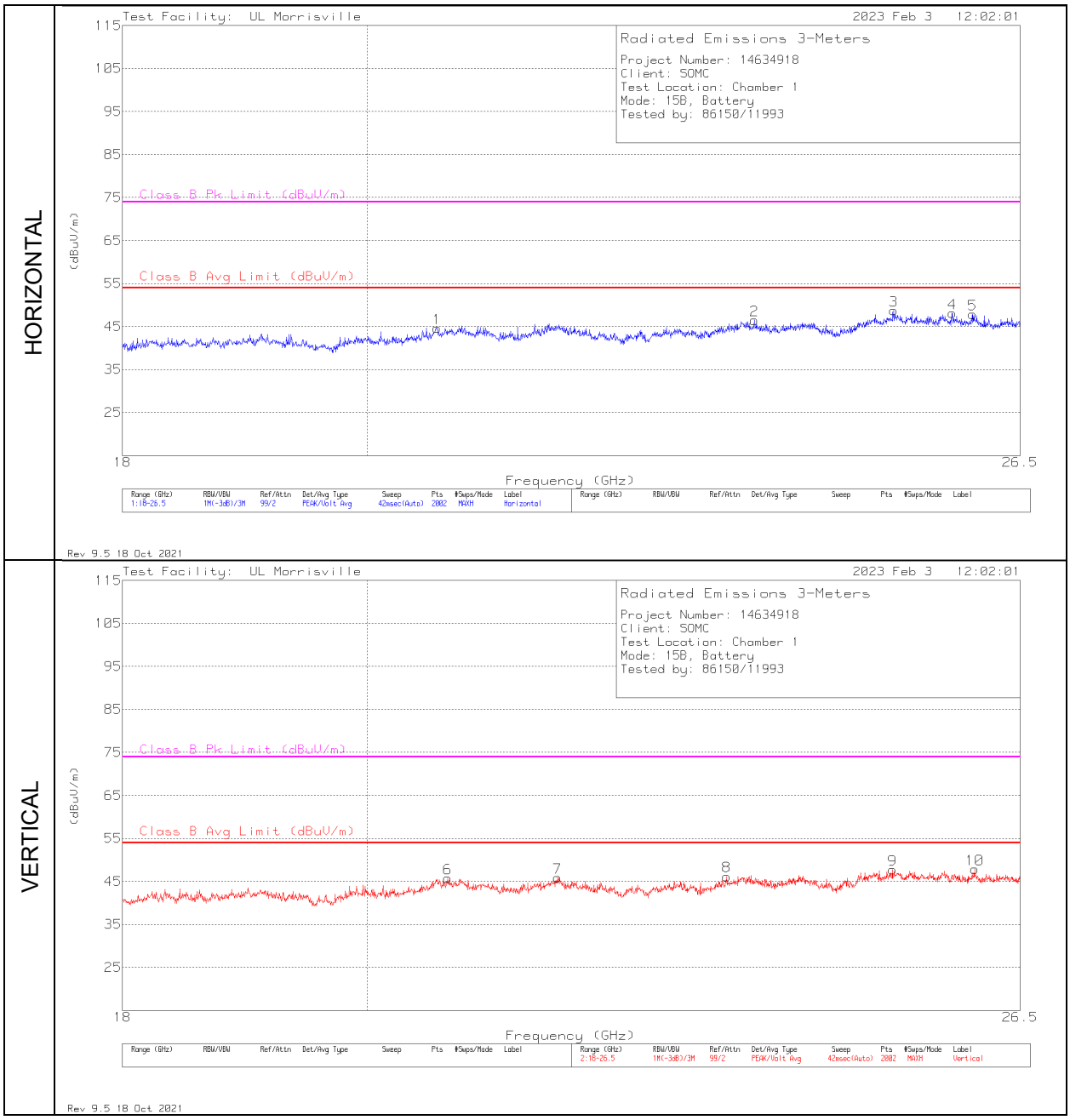
Radiated Emissions Data Points

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Avg Limit (dBuV/m)	Margin (dB)	Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.92178	40.22	Pk	31.3	-35.2	36.32	54	-17.68	74	-37.68	0-360	101	H
4	1.98033	39.91	Pk	32	-35.2	36.71	54	-17.29	74	-37.29	0-360	200	V
5	3.51033	39.12	Pk	33	-32.9	39.22	54	-14.78	74	-34.78	0-360	200	V
2	4.85805	38.2	Pk	34.1	-31.9	40.4	54	-13.6	74	-33.6	0-360	101	H
6	9.90138	36.54	Pk	37	-28.7	44.84	54	-9.16	74	-29.16	0-360	200	V
3	9.93633	36.02	Pk	37	-28	45.02	54	-8.98	74	-28.98	0-360	200	H

Pk - Peak detector
SN: QV77002NFN

RADIATED EMISSIONS 18,000 TO 26,000 MHz – Battery

Radiated Emissions Graph



Radiated Emissions Data Points

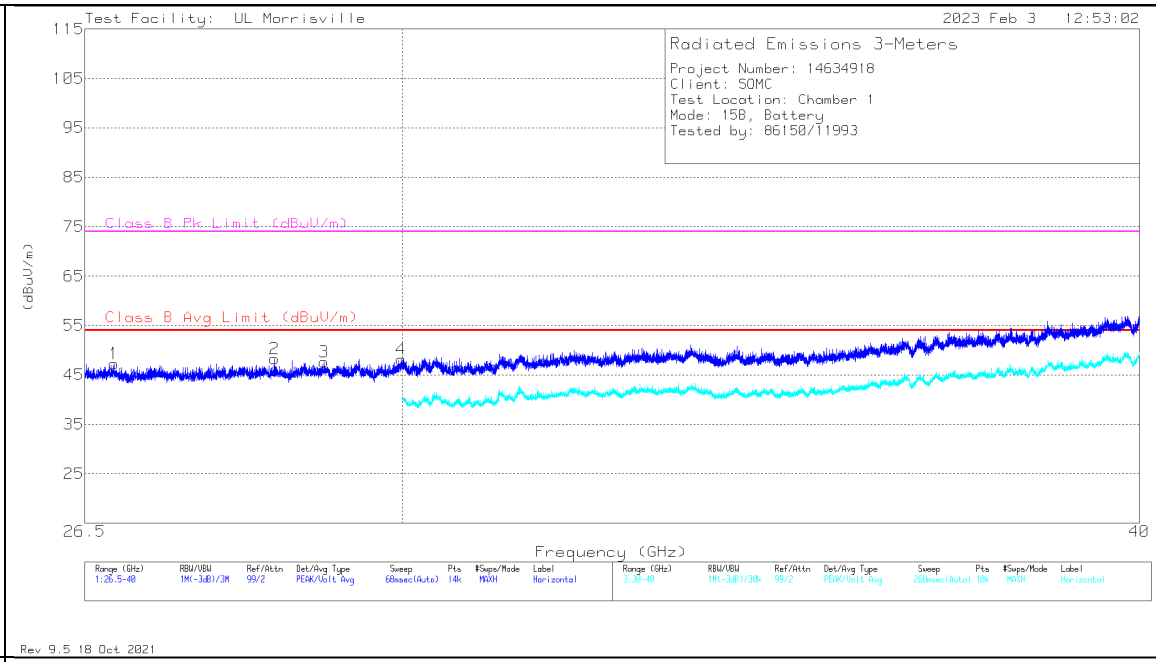
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	204704 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	20.61244	49.69	Pk	34.1	-39.1	44.69	54	-9.31	74	-29.31	0-360	151	H
6	20.71014	50.99	Pk	34	-39.2	45.79	54	-8.21	74	-28.21	0-360	150	V
7	21.71264	49.91	Pk	34.4	-38.4	45.91	54	-8.09	74	-28.09	0-360	150	V
8	23.35232	50.49	Pk	35.1	-39.4	46.19	54	-7.81	74	-27.81	0-360	199	V
2	23.63268	50.64	Pk	35.2	-39.4	46.44	54	-7.56	74	-27.56	0-360	250	H
9	25.08121	50.06	Pk	35.7	-38	47.76	54	-6.24	74	-26.24	0-360	199	V
3	25.09361	48.92	Pk	35.7	-37.9	46.72	-	-	74	-27.28	0	360	H
	25.09361	39.86	Av	35.7	-37.9	37.66	54	-16.34	74	-36.34	0	360	H
4	25.73479	49.36	Pk	35.9	-38.2	47.06	-	-	74	-26.94	259	141	H
	25.73479	39.74	Av	35.9	-38.2	37.44	54	-16.56	74	-36.56	259	141	H
5	25.96477	49.32	Pk	35.9	-37.4	47.82	54	-6.18	74	-26.18	0-360	300	H
10	25.98601	49.21	Pk	35.9	-37.3	47.81	54	-6.19	74	-26.19	0-360	300	V

Pk - Peak detector
Av - Average detection
SN: QV77002NFN

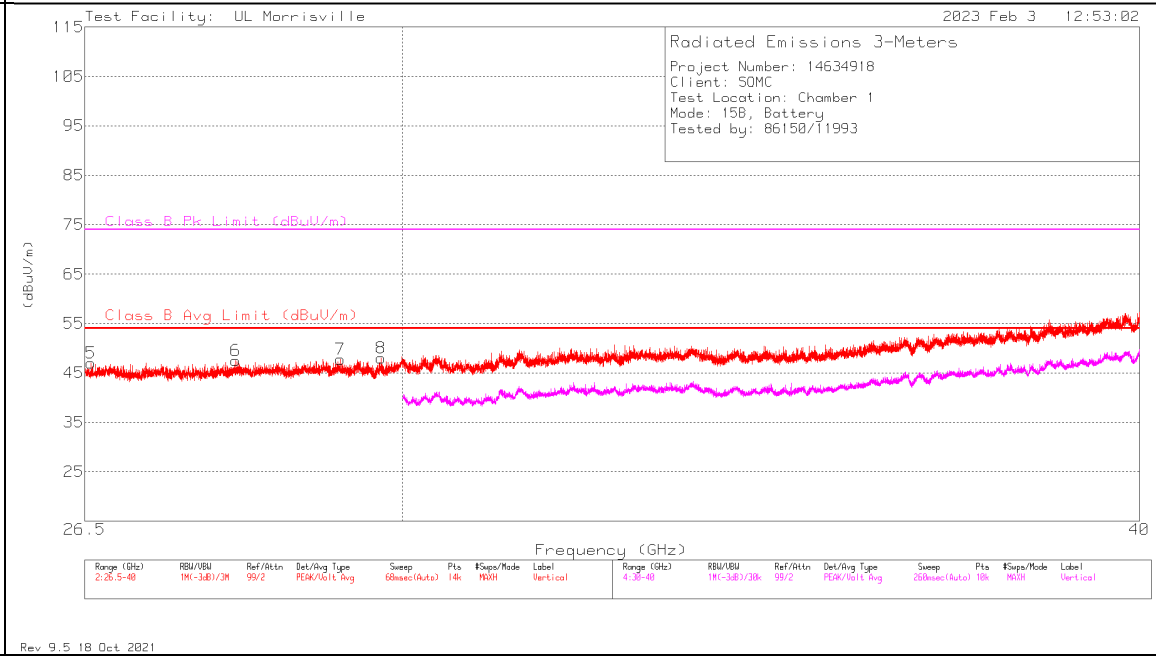
RADIATED EMISSIONS 26,000 TO 40,000 MHz – Battery

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

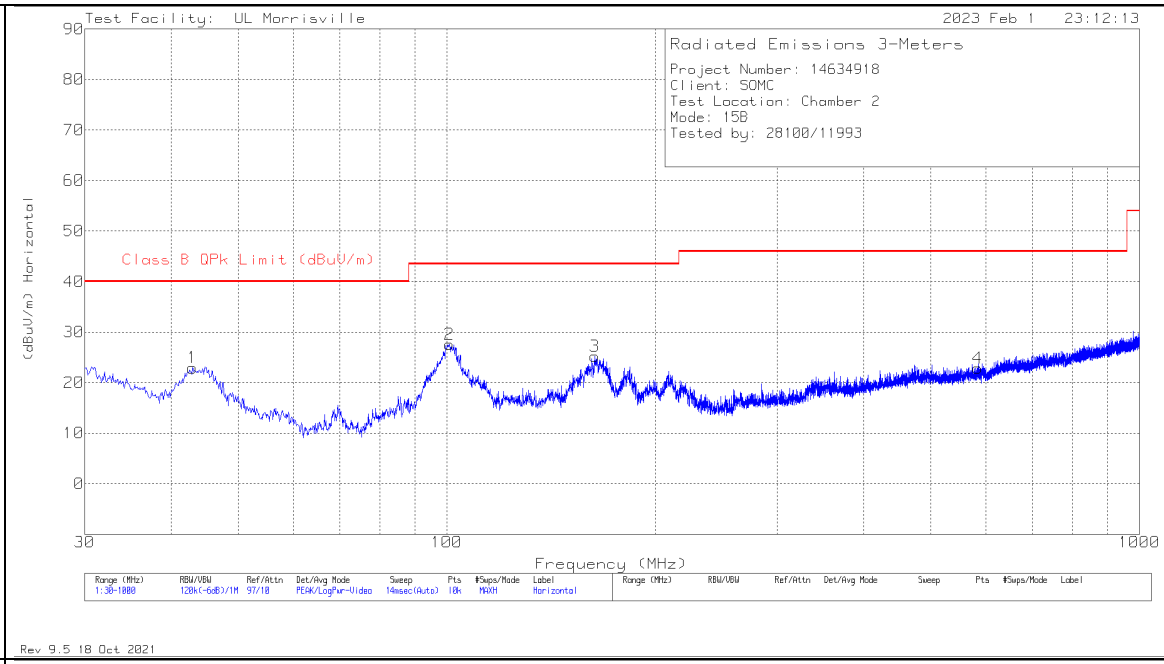
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	204705 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	26.56557	47.95	Pk	36.3	-37.3	46.95	54	-7.05	74	-27.05	0-360	151	V
1	26.80276	48.01	Pk	36.2	-36.9	47.31	54	-6.69	74	-26.69	0-360	150	H
6	28.10639	47.75	Pk	36.6	-36.8	47.55	54	-6.45	74	-26.45	0-360	101	V
2	28.536	48.7	Pk	36.5	-36.6	48.6	-	-	74	-25.4	61	111	H
	28.536	38.46	Av	36.5	-36.6	38.36	54	-15.64	74	-35.64	61	111	H
3	29.09567	47.33	Pk	36.6	-36.3	47.63	54	-6.37	74	-26.37	0-360	300	H
7	29.27984	47.46	Pk	36.5	-36.2	47.76	54	-6.24	74	-26.24	0-360	101	V
8	29.75134	47.97	Pk	36.6	-36.6	47.97	54	-6.03	74	-26.03	0-360	300	V
4	29.98196	48.42	Pk	36.8	-36	49.22	-	-	74	-24.78	208	149	H
	29.98196	38.24	Av	36.8	-36	39.04	54	-14.96	74	-34.96	208	149	H

Pk - Peak detector
Av - Average detection
SN: QV77002NFN

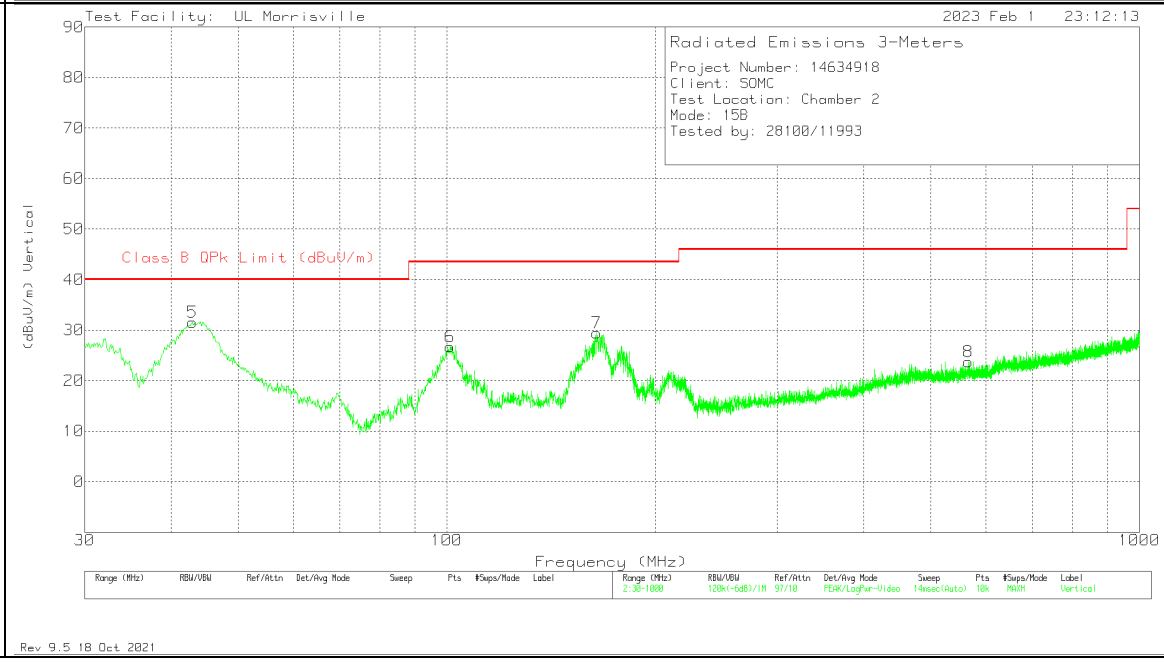
RADIATED EMISSIONS 30 TO 1000 MHz – Power Supply

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

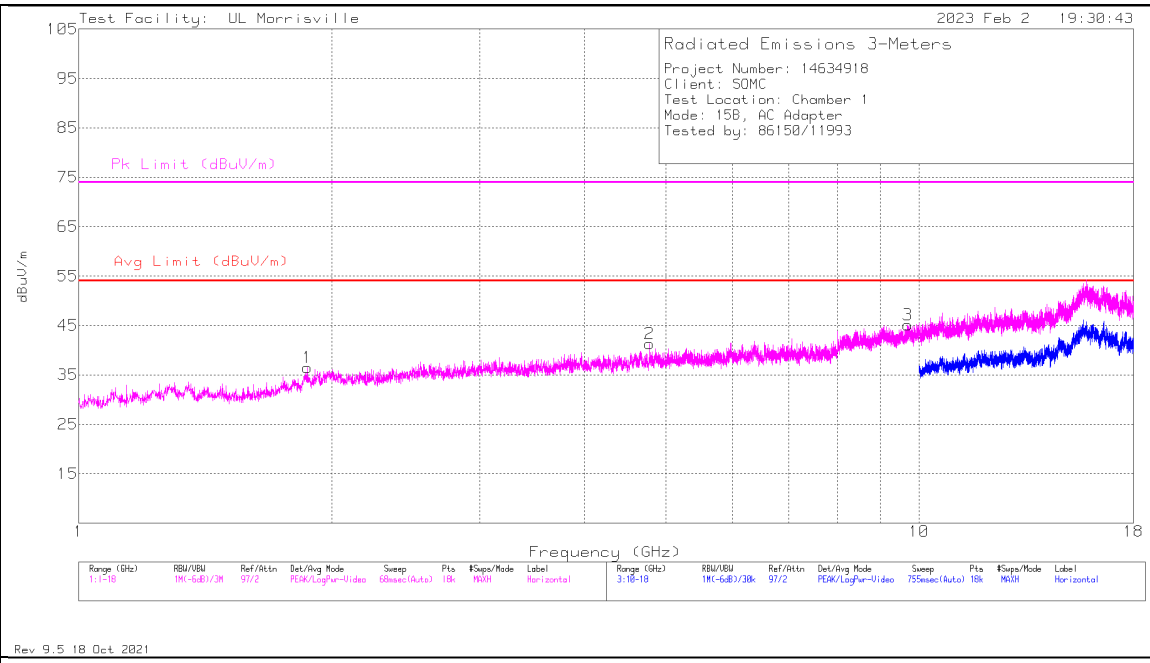
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0074 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	42.901	36.53	Pk	17.8	-31.4	22.93	40	-17.07	0-360	399	H
5	42.901	45.16	Pk	17.8	-31.4	31.56	40	-8.44	0-360	101	V
2	100.81	41.43	Pk	16.7	-30.5	27.63	43.52	-15.89	0-360	299	H
6	101.101	40.41	Pk	16.8	-30.5	26.71	43.52	-16.81	0-360	101	V
3	163.375	36.97	Pk	18.3	-30	25.27	43.52	-18.25	0-360	199	H
7	164.539	40.72	Pk	18.3	-29.6	29.42	43.52	-14.1	0-360	101	V
8	565.731	26.92	Pk	24.3	-27.5	23.72	46.02	-22.3	0-360	299	V
4	583.579	26.02	Pk	24.3	-27.4	22.92	46.02	-23.1	0-360	101	H

Pk - Peak detector

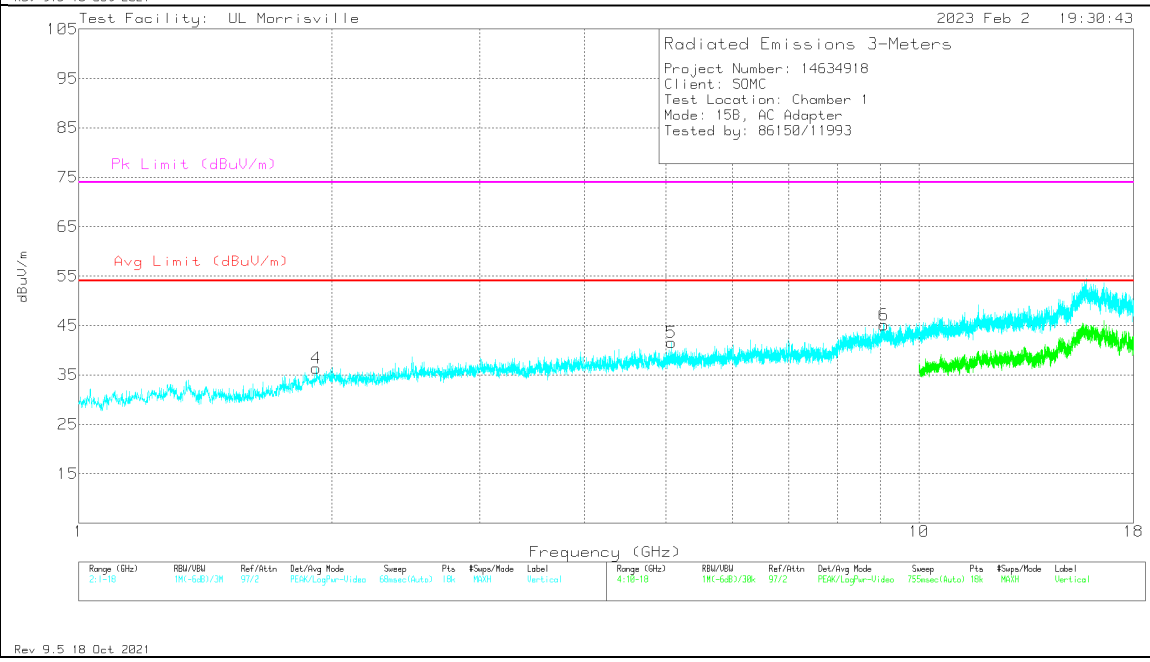
RADIATED EMISSIONS 1000 TO 18,000 MHz – Power Supply

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

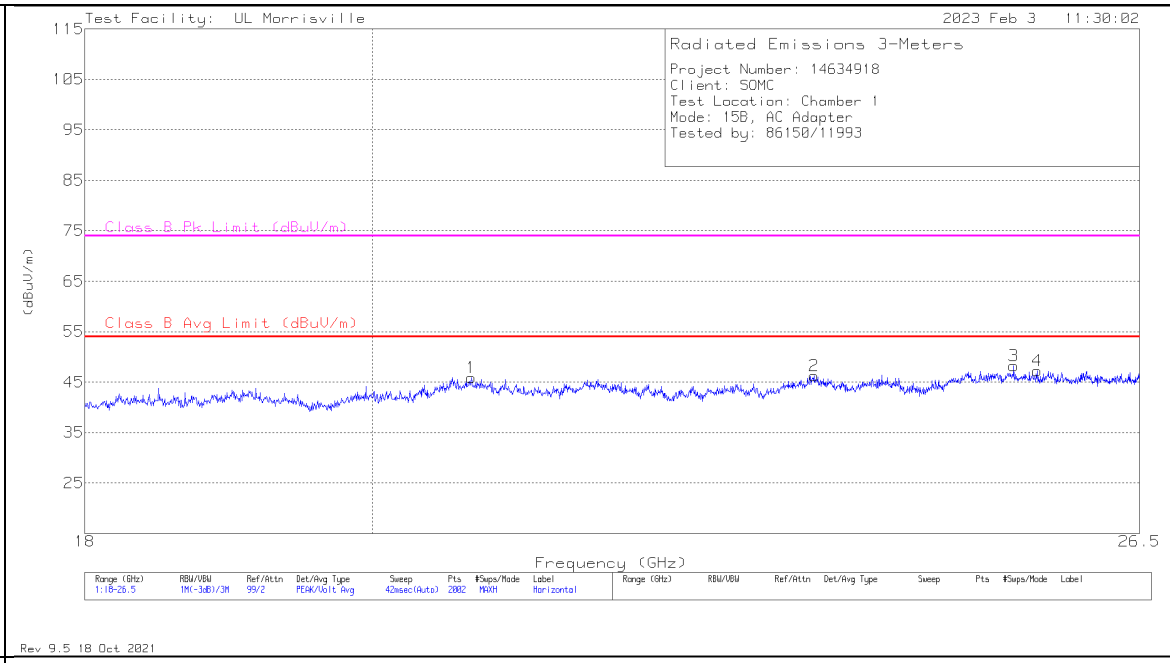
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Avg Limit (dBuV/m)	Margin (dB)	Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.87172	40.92	Pk	31.4	-35.8	36.52	54	-17.48	74	-37.48	0-360	101	H
4	1.91706	40.47	Pk	31.3	-35.4	36.37	54	-17.63	74	-37.63	0-360	200	V
2	4.78344	39.28	Pk	34.1	-32.1	41.28	54	-12.72	74	-32.72	0-360	200	H
5	5.08	39.02	Pk	34.2	-31.7	41.52	54	-12.48	74	-32.48	0-360	200	V
6	9.0835	37.87	Pk	36.3	-29.1	45.07	54	-8.93	74	-28.93	0-360	200	V
3	9.69833	37.17	Pk	36.8	-28.8	45.17	54	-8.83	74	-28.83	0-360	101	H

Pk - Peak detector

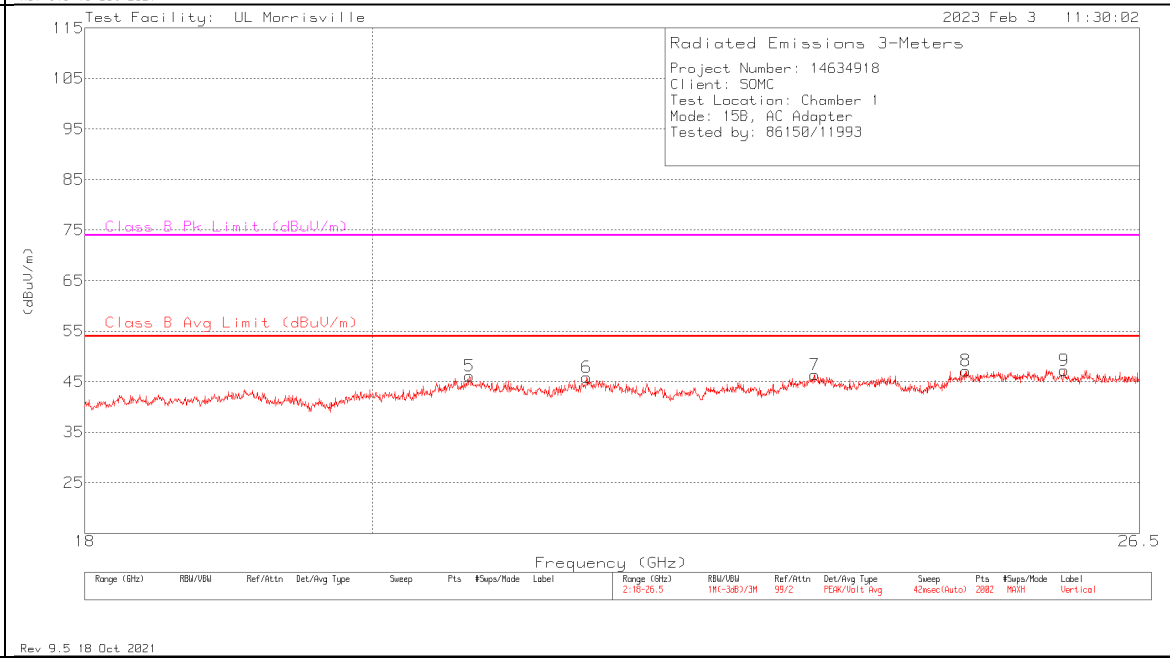
RADIATED EMISSIONS 18,000 TO 26,000 MHz – Power Supply

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

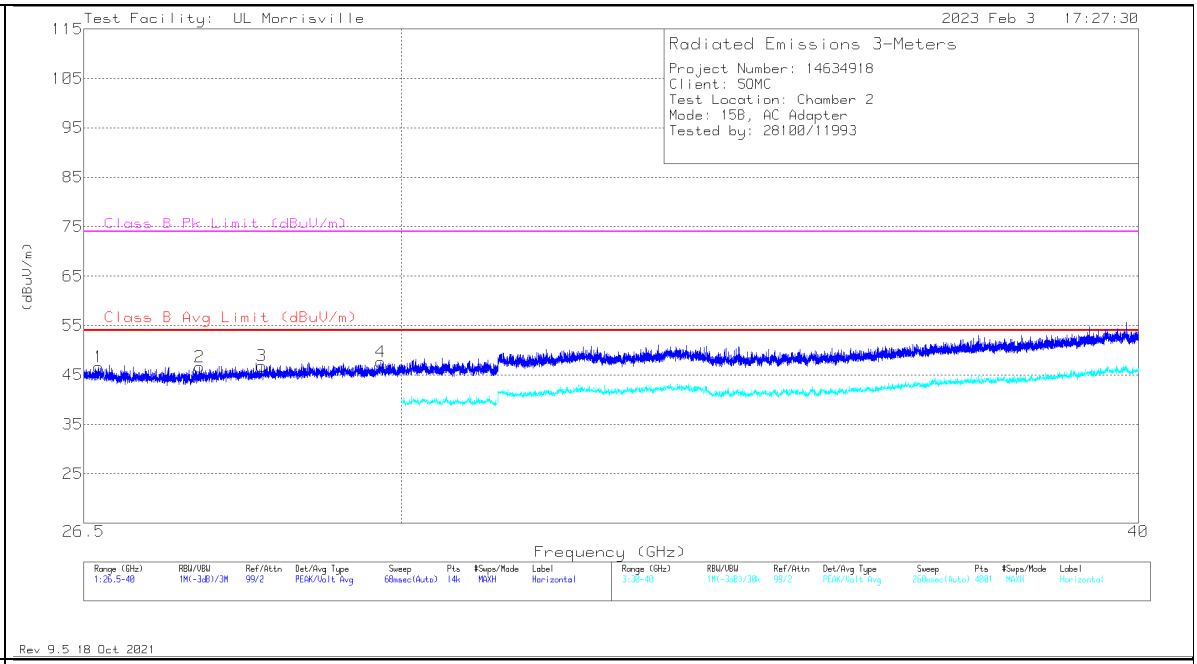
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	204704 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	20.72714	51.2	Pk	34	-39.1	46.1	54	-7.9	74	-27.9	0-360	199	V
1	20.73988	50.96	Pk	34	-39.1	45.86	54	-8.14	74	-28.14	0-360	150	H
6	21.63618	50.66	Pk	34.2	-39	45.86	54	-8.14	74	-28.14	0-360	249	V
2	23.51799	49.76	Pk	35.2	-38.7	46.26	54	-7.74	74	-27.74	0-360	101	H
7	23.52649	49.96	Pk	35.2	-38.8	46.36	54	-7.64	74	-27.64	0-360	150	V
8	24.86457	49.98	Pk	35.5	-38.3	47.18	54	-6.82	74	-26.82	0-360	249	V
3	25.30822	49.11	Pk	36.2	-37.6	47.71	-	-	74	-26.29	206	349	H
	25.30822	39.66	Av	36.2	-37.6	38.26	54	-15.74	74	-35.74	206	349	H
4	25.52299	49.24	Pk	36	-38	47.24	54	-6.76	74	-26.76	0-360	300	H
9	25.77786	49.6	Pk	35.9	-38.3	47.2	54	-6.8	74	-26.8	0-360	199	V

Pk - Peak detector
Av - Average detection

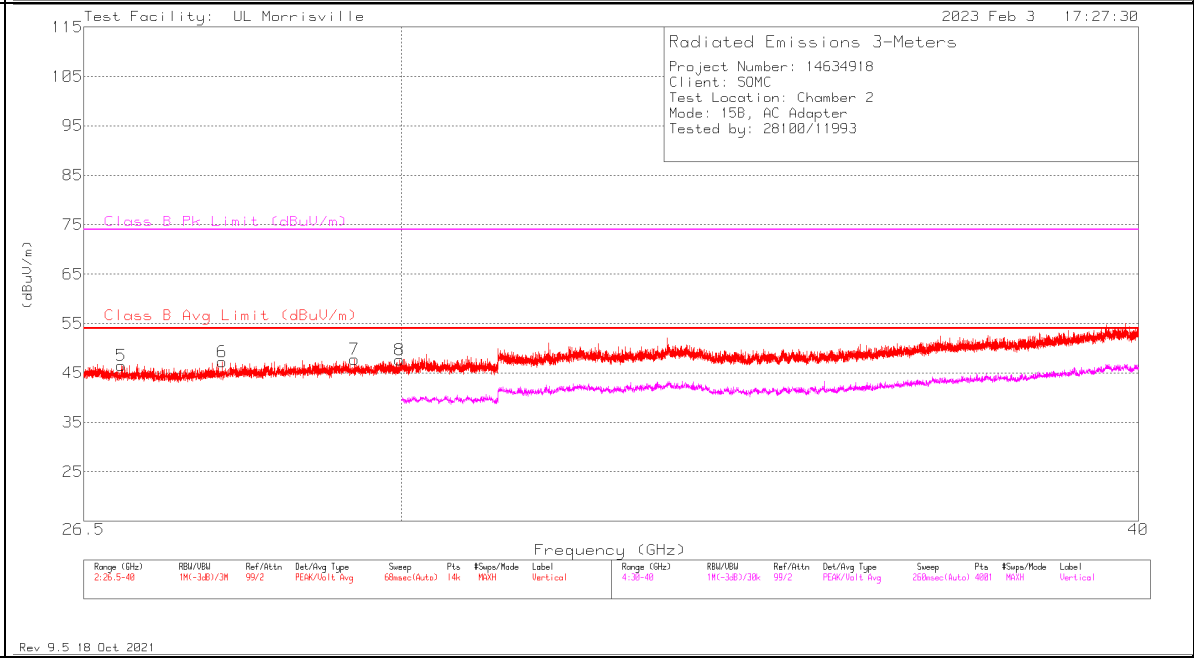
RADIATED EMISSIONS 26,000 TO 40,000 MHz – Power Supply

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

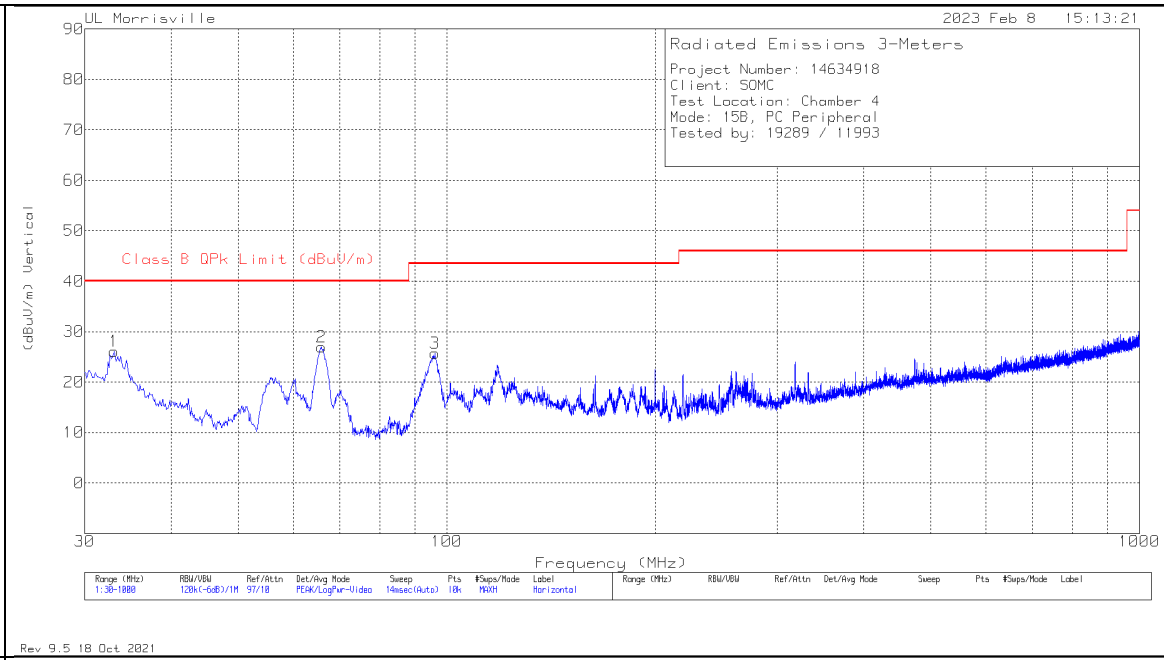
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	204705 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	26.65235	46.43	Pk	36.3	-36.1	46.63	54	-7.37	74	-27.37	0-360	300	H
5	26.89147	46.47	Pk	36.1	-36.1	46.47	54	-7.53	74	-27.53	0-360	250	V
2	27.72938	46.12	Pk	36.2	-35.7	46.62	54	-7.38	74	-27.38	0-360	300	H
6	27.9714	46.27	Pk	36.5	-35.5	47.27	54	-6.73	74	-26.73	0-360	250	V
3	28.40433	45.61	Pk	36.5	-35.3	46.81	54	-7.19	74	-27.19	0-360	200	H
7	29.45629	45.61	Pk	36.5	-34.4	47.71	54	-6.29	74	-26.29	0-360	150	V
4	29.76098	45.15	Pk	36.6	-34.1	47.65	54	-6.35	74	-26.35	0-360	100	H
8	29.97986	45.21	Pk	36.8	-34.4	47.61	54	-6.39	74	-26.39	0-360	250	V

Pk - Peak detector

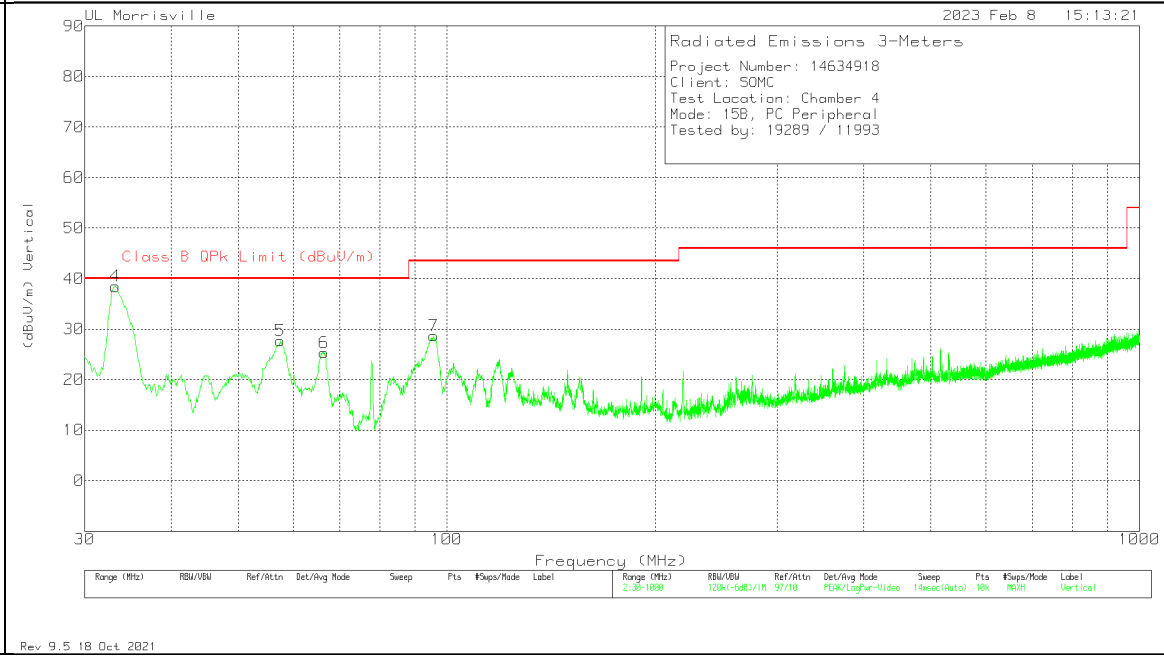
RADIATED EMISSIONS 30 TO 1000 MHz – PC Peripheral

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

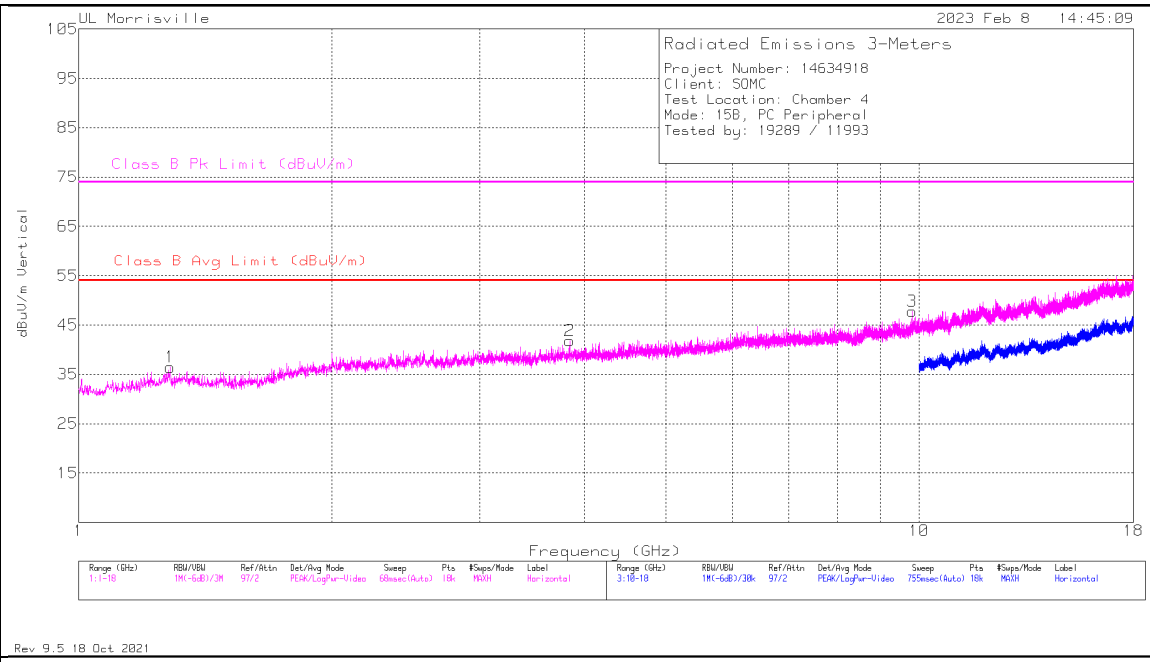
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90629 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	33.104	32.92	Pk	24.9	-31.7	26.12	40	-13.88	0-360	200	H
4	33.2223	43.59	Qp	24.8	-31.7	36.69	40	-3.31	256	102	V
5	57.451	45.66	Pk	13.5	-31.4	27.76	40	-12.24	0-360	100	V
2	65.89	44	Pk	14.2	-31.2	27	40	-13	0-360	300	H
6	66.472	42.39	Pk	14.2	-31.2	25.39	40	-14.61	0-360	100	V
7	95.766	43.65	Pk	15.9	-30.9	28.65	43.52	-14.87	0-360	100	V
3	96.154	40.39	Pk	16.1	-30.8	25.69	43.52	-17.83	0-360	200	H

Pk - Peak detector
Qp - Quasi-Peak detector

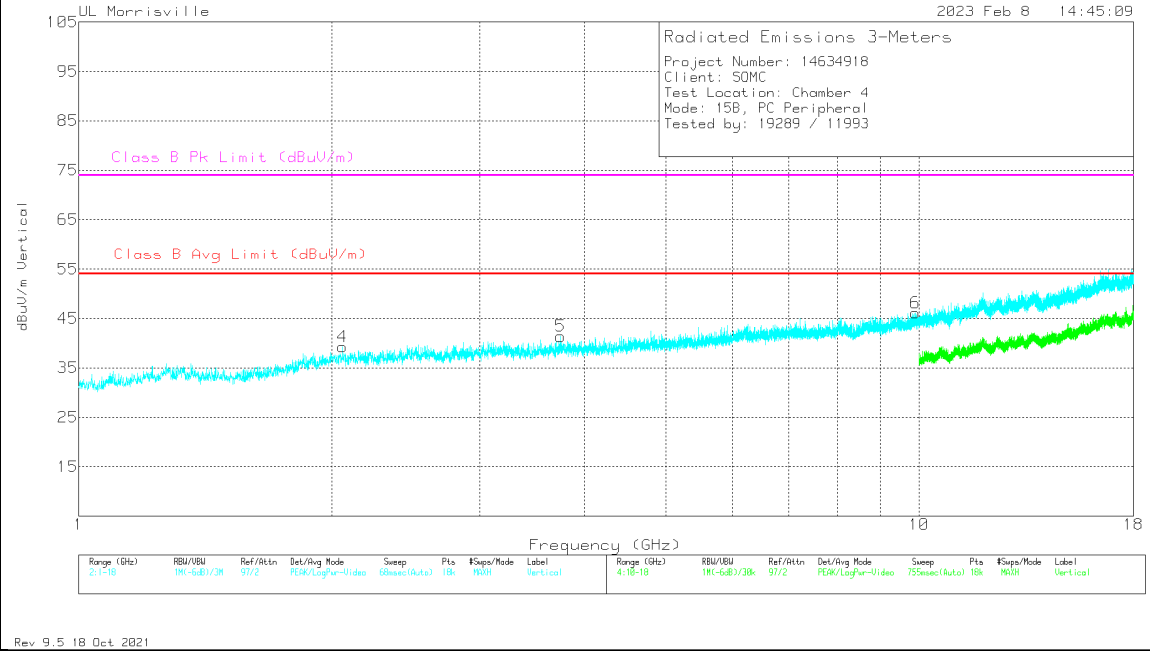
RADIATED EMISSIONS 1000 TO 18,000 MHz – PC Peripheral

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

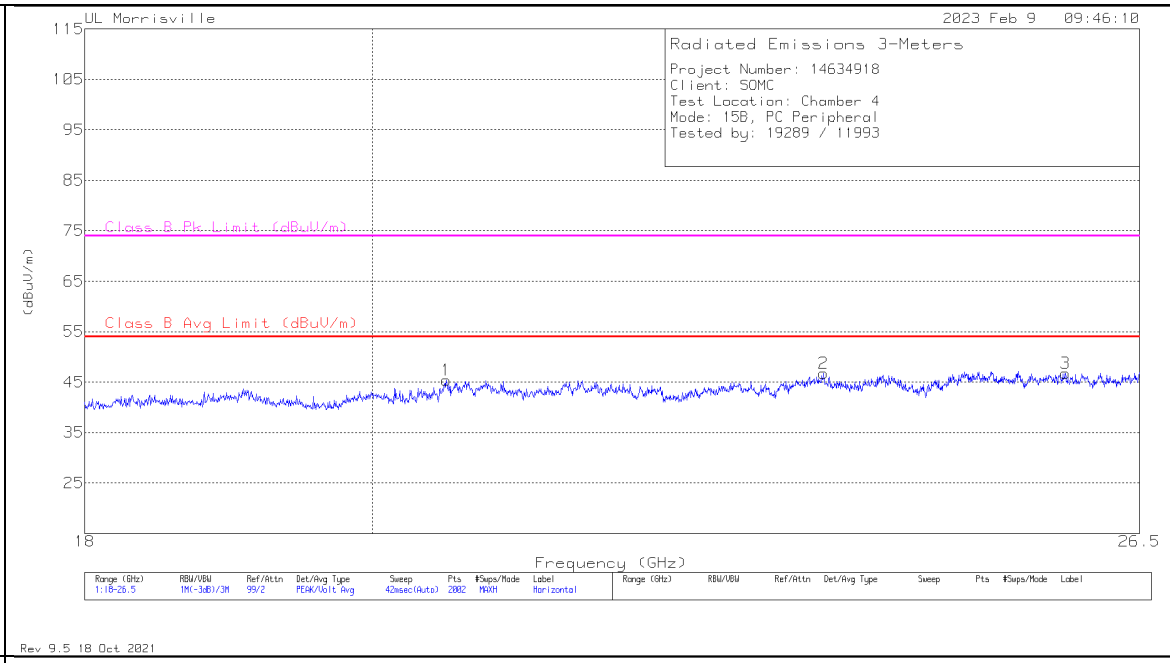
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.28522	42.83	Pk	29.6	-36	36.43	54	-17.57	74	-37.57	0-360	100	H
4	2.06156	43.68	Pk	32	-36.4	39.28	54	-14.72	74	-34.72	0-360	200	V
5	3.74267	42.08	Pk	33.5	-34.2	41.38	54	-12.62	74	-32.62	0-360	200	V
2	3.83994	42.07	Pk	33.5	-33.8	41.77	54	-12.23	74	-32.23	0-360	100	H
3	9.81261	37.39	Pk	36.9	-26.5	47.79	54	-6.21	74	-26.21	0-360	100	H
6	9.90847	36.01	Pk	37	-26.9	46.11	54	-7.89	74	-27.89	0-360	200	V

Pk - Peak detector

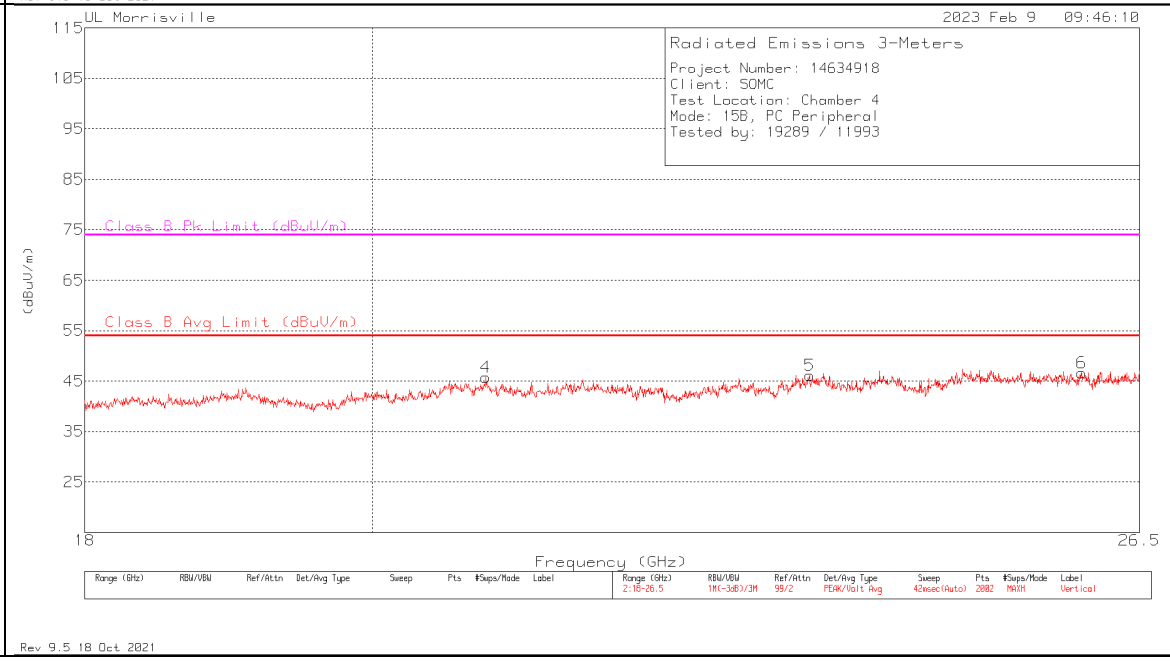
RADIATED EMISSIONS 18,000 TO 26,000 MHz – PC Peripheral

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

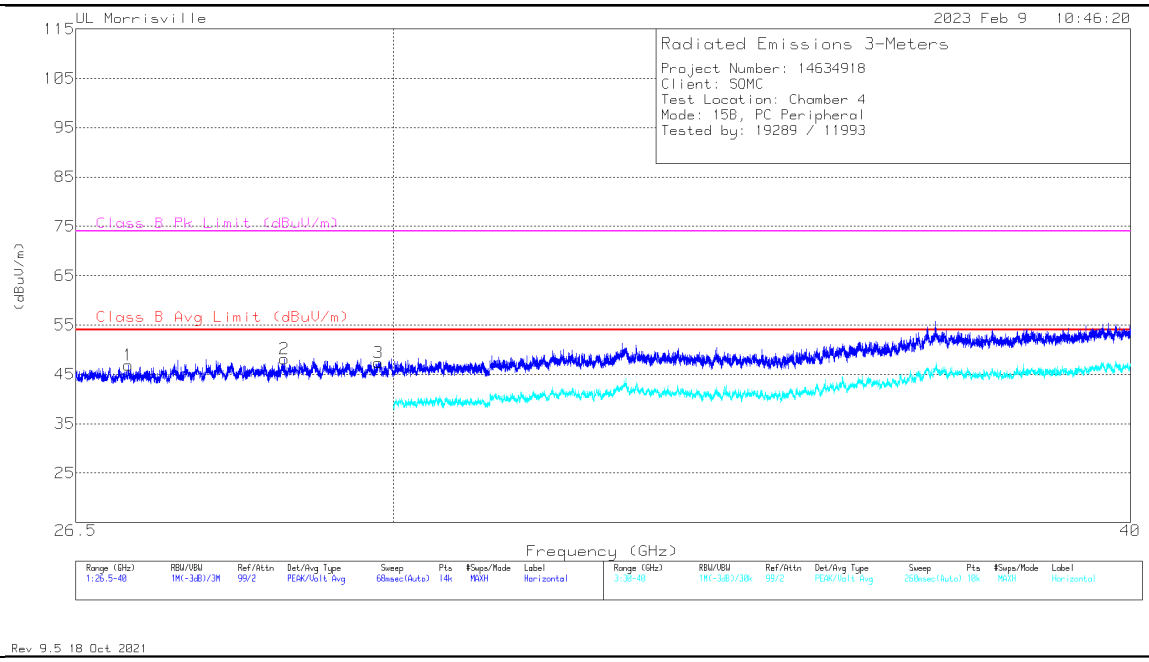
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	204704 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	20.55297	49.73	Pk	34.1	-38.4	45.43	54	-8.57	74	-28.57	0-360	100	H
4	20.85032	50.5	Pk	34	-38.7	45.8	54	-8.2	74	-28.2	0-360	150	V
5	23.47976	48.39	Pk	35.2	-37.5	46.09	54	-7.91	74	-27.91	0-360	300	V
2	23.60295	48.6	Pk	35.3	-37.2	46.7	54	-7.3	74	-27.3	0-360	250	H
3	25.7906	48.08	Pk	35.9	-37.2	46.78	54	-7.22	74	-27.22	0-360	150	H
6	25.94778	47.45	Pk	35.9	-36.7	46.65	54	-7.35	74	-27.35	0-360	150	V

Pk - Peak detector

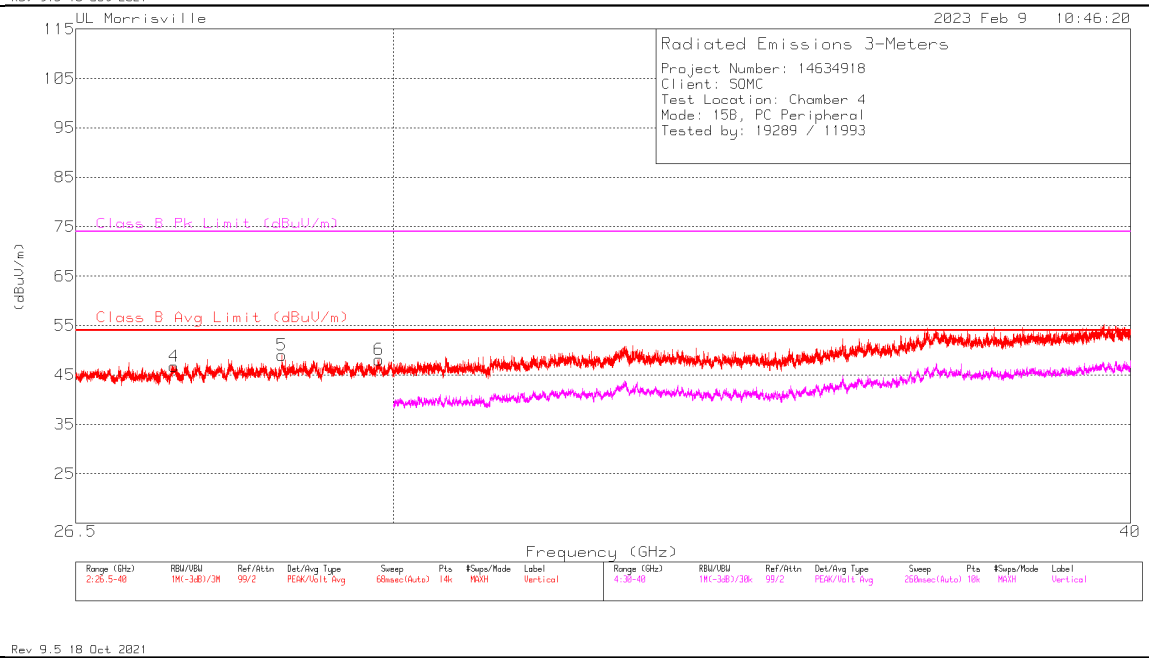
RADIATED EMISSIONS 26,000 TO 40,000 MHz – PC Peripheral

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

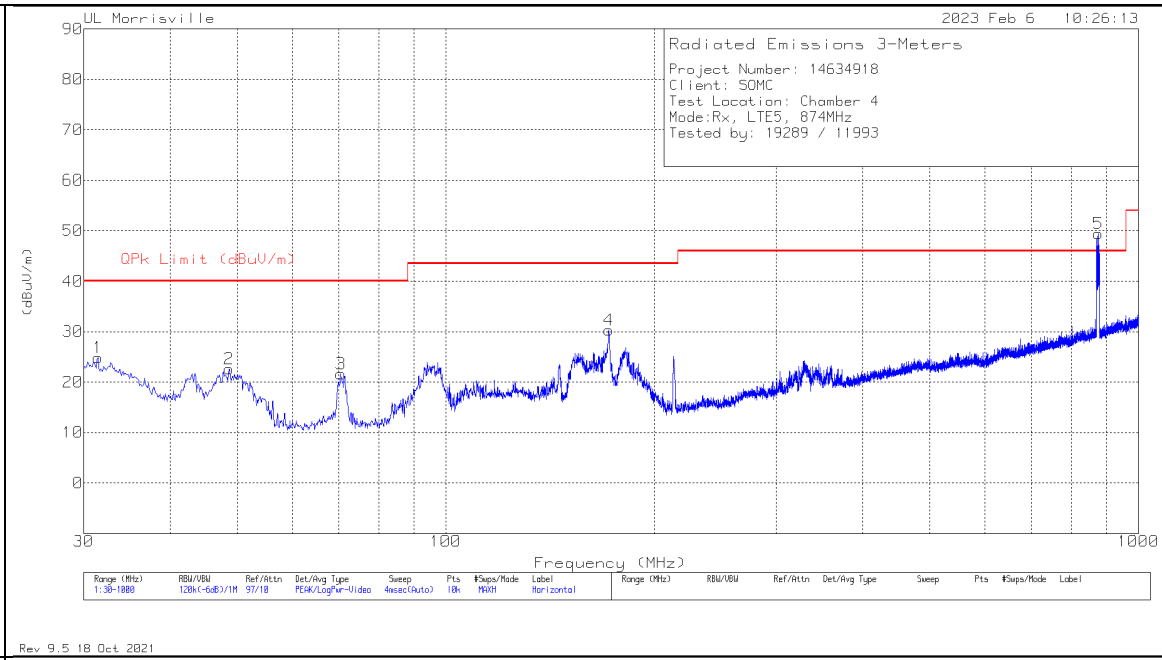
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	204705 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B Avg Limit (dBuV/m)	Margin (dB)	Class B Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	27.04671	47.92	Pk	36.2	-37.3	46.82	54	-7.18	74	-27.18	0-360	150	H
4	27.53943	47.62	Pk	36.1	-37	46.72	54	-7.28	74	-27.28	0-360	300	V
5	28.72404	44.15	Pk	36.4	-36.8	43.75	-	-	74	-30.25	325	167	V
	28.72404	34.24	Av	36.4	-36.8	33.84	54	-20.16	-	-	325	167	V
2	28.74713	49.82	Pk	36.4	-37.7	48.52	-	-	74	-25.48	224	269	H
	28.7474	34.32	Av	36.4	-37.7	33.02	54	-20.98	-	-	224	269	H
3	29.82173	47.69	Pk	36.7	-37	47.39	54	-6.61	74	-26.61	0-360	100	H
6	29.82685	43.65	Pk	36.7	-37	43.35	-	-	74	-30.65	21	133	V
	29.82685	34.4	Av	36.7	-37	34.1	54	-19.9	-	-	21	133	V

Pk - Peak detector
Av - Average detection

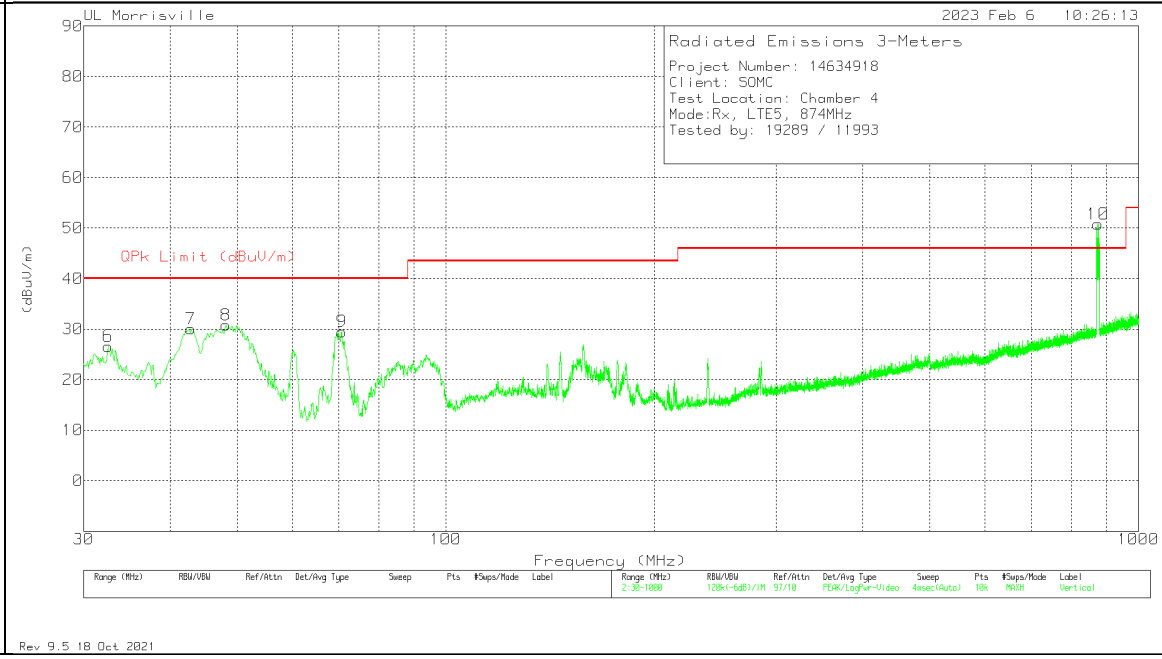
RADIATED EMISSIONS 30 TO 1000 MHz – LTE B5 Rx 874MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

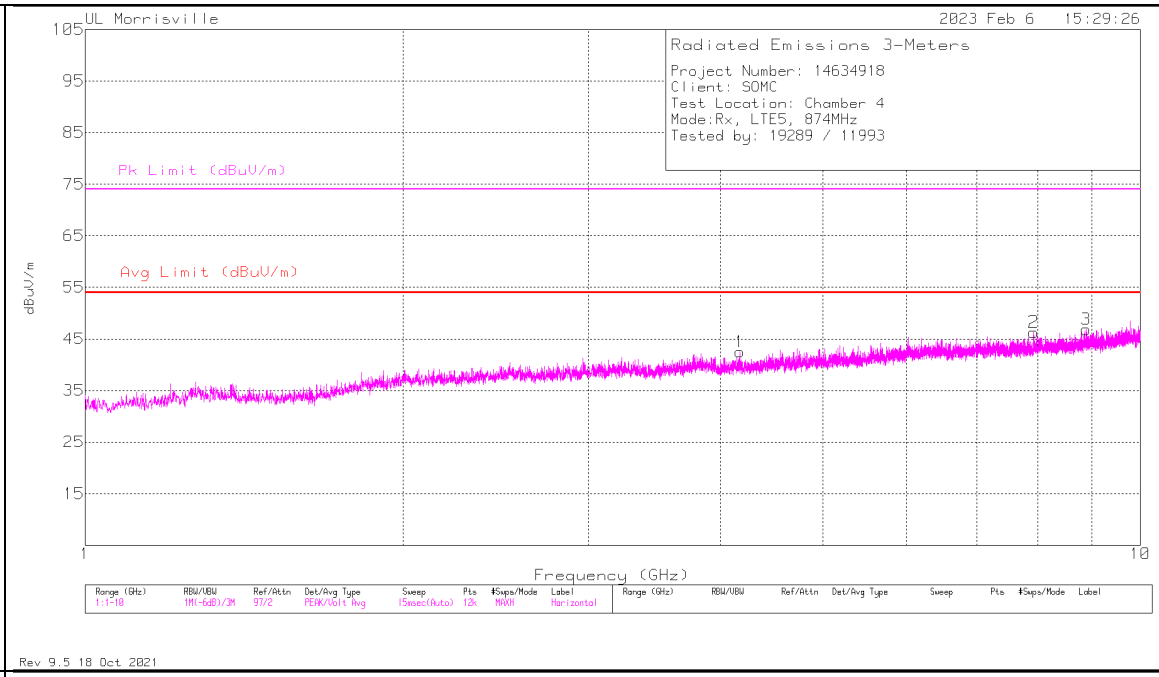
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90629 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	31.455	30.58	Pk	26.1	-31.8	24.88	40	-15.12	0-360	200	H
6	32.522	33.05	Pk	25.3	-31.7	26.65	40	-13.35	0-360	100	V
7	42.804	43.75	Pk	17.7	-31.4	30.05	40	-9.95	0-360	100	V
8	48.139	47.51	Pk	14.7	-31.4	30.81	40	-9.19	0-360	100	V
2	48.624	39.53	Pk	14.6	-31.5	22.63	40	-17.37	0-360	300	H
3	70.546	38.42	Pk	14.4	-31.2	21.62	40	-18.38	0-360	100	H
9	70.74	46.31	Pk	14.4	-31.2	29.51	40	-10.49	0-360	200	V
4	171.911	42.5	Pk	17.8	-30	30.3	43.52	-13.22	0-360	100	H
10^{DL}	874.191	48.73	Pk	28	-25.9	50.83	-	-	0-360	100	V
5^{DL}	874.385	47.31	Pk	28	-25.9	49.41	-	-	0-360	300	H

Pk - Peak detector
DL - Downlink

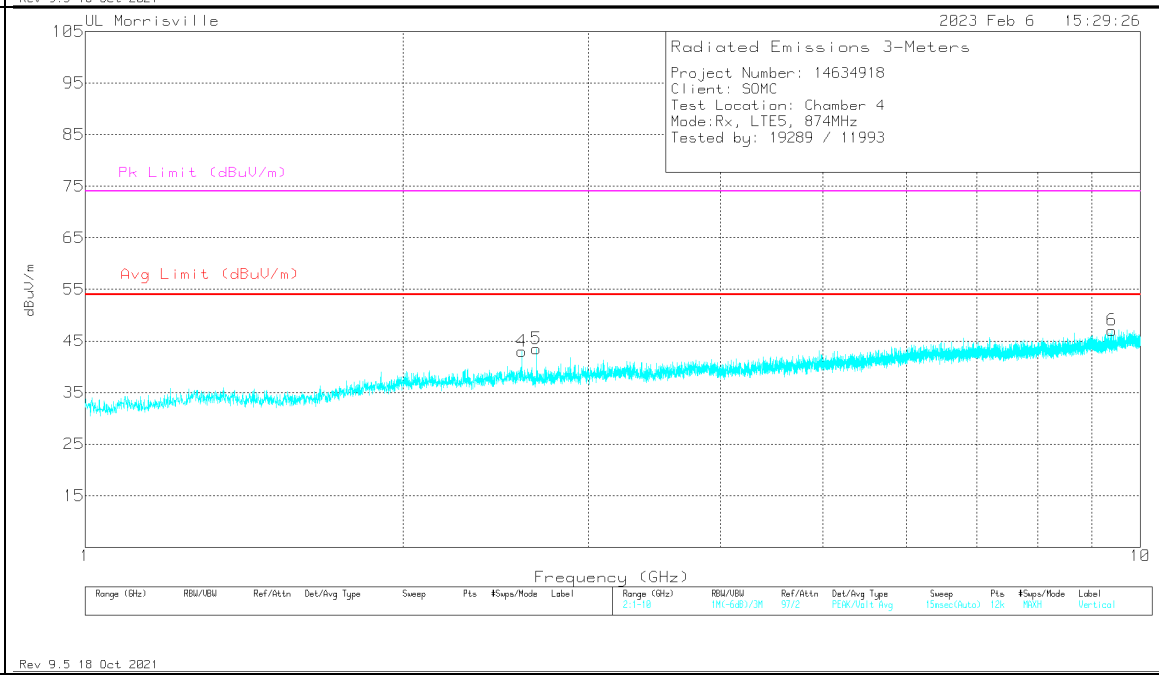
RADIATED EMISSIONS 1000 TO 10,000 MHz – LTE B5 Rx 874.0MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

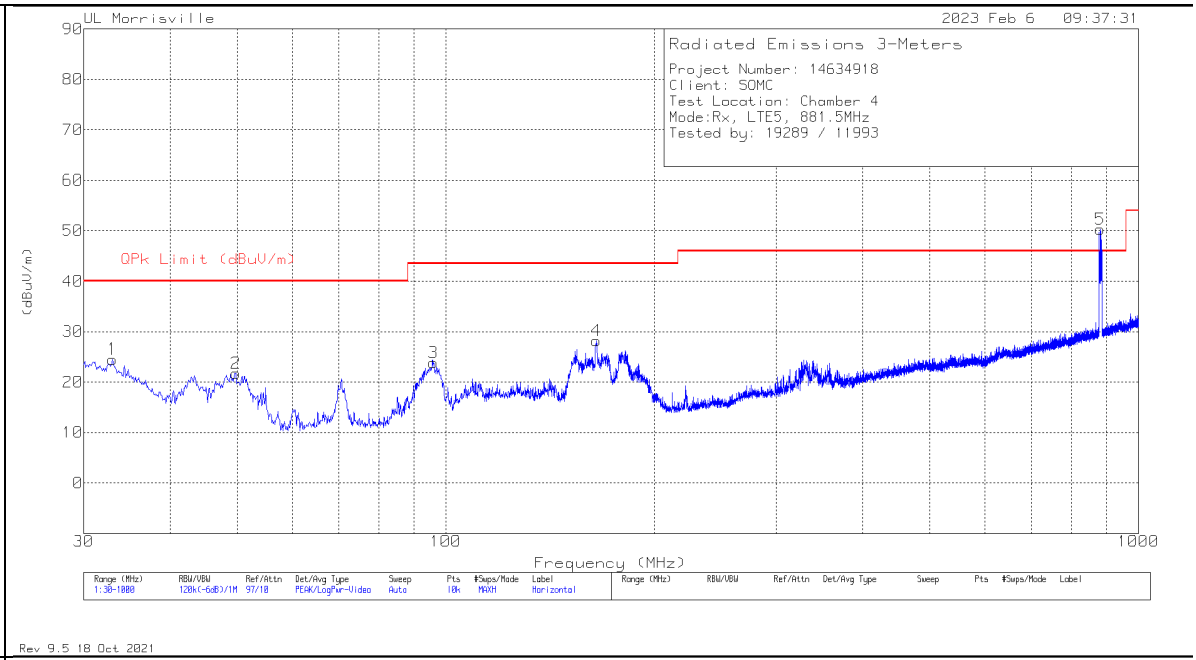
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Avg Limit (dBuV/m)	Margin (dB)	Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	2.593	46.62	Pk	32.6	-36.2	43.02	54	-10.98	74	-30.98	0-360	200	V
5	2.6755	47.41	Pk	32.3	-36.2	43.51	54	-10.49	74	-30.49	0-360	200	V
1	4.174	41.69	Pk	33.4	-32.6	42.49	54	-11.51	74	-31.51	0-360	100	H
2	7.924	39.09	Pk	35.8	-28.6	46.29	54	-7.71	74	-27.71	0-360	100	H
3	8.88925	37.25	Pk	36.1	-26.5	46.85	54	-7.15	74	-27.15	0-360	100	H
6	9.3985	37.06	Pk	36.5	-26.5	47.06	54	-6.94	74	-26.94	0-360	200	V

Pk - Peak detector

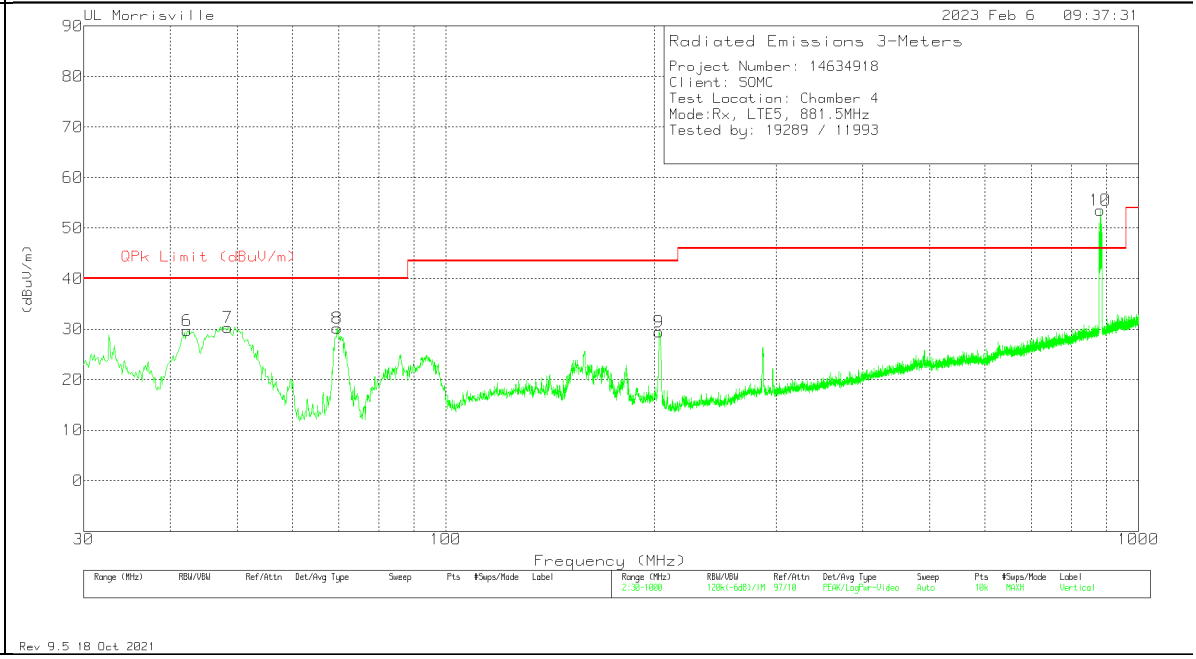
RADIATED EMISSIONS 30 TO 1000 MHz – LTE B5 Rx 881.5MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

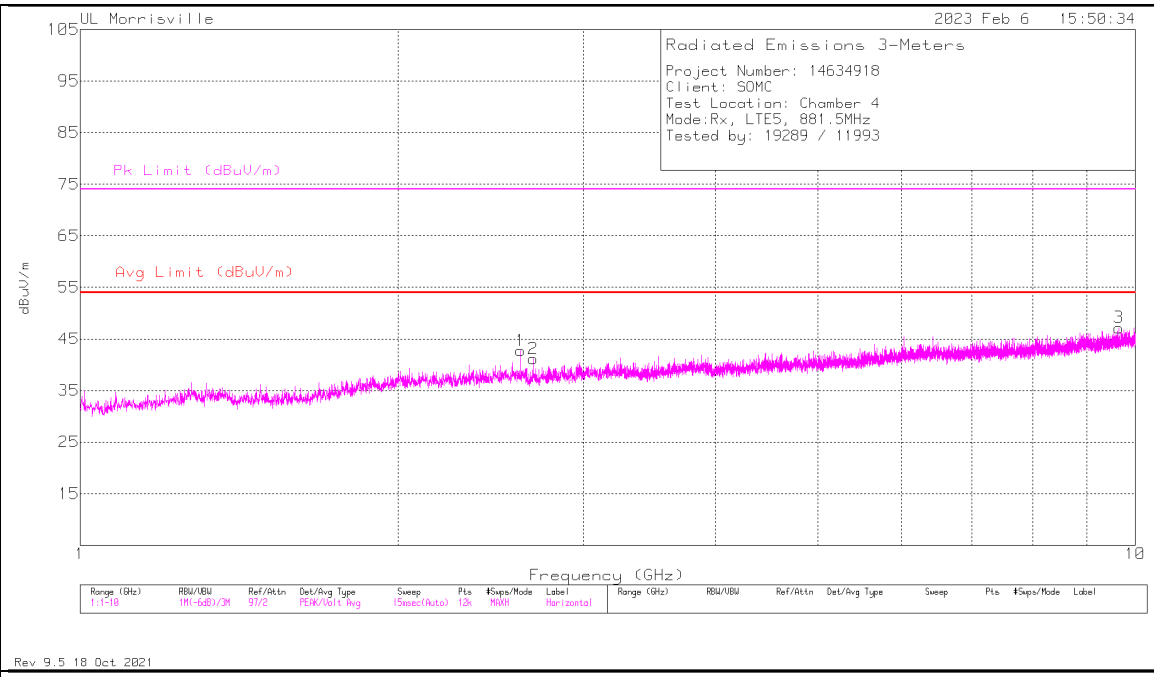
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90629 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Class B QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	33.007	31.24	Pk	25	-31.7	24.54	40	-15.46	0-360	100	H
6	42.319	42.95	Pk	18.1	-31.4	29.65	40	-10.35	0-360	100	V
7	48.43	47.23	Pk	14.6	-31.5	30.33	40	-9.67	0-360	100	V
2	49.788	39	Pk	14.2	-31.4	21.8	40	-18.2	0-360	300	H
8	69.673	46.96	Pk	14.4	-31.2	30.16	40	-9.84	0-360	100	V
3	95.863	38.84	Pk	15.9	-30.9	23.84	43.52	-19.68	0-360	100	H
4	164.8785	39.99	Pk	18.3	-30.1	28.19	43.52	-15.33	0-360	100	H
9	203.242	40.9	Pk	18.3	-29.8	29.4	43.52	-14.12	0-360	100	V
5^{DL}	881.078	47.96	Pk	28	-25.6	50.36	-	-	0-360	300	H
10^{DL}	881.175	51.15	Pk	28	-25.6	53.55	-	-	0-360	100	V

Pk - Peak detector
DL - Downlink

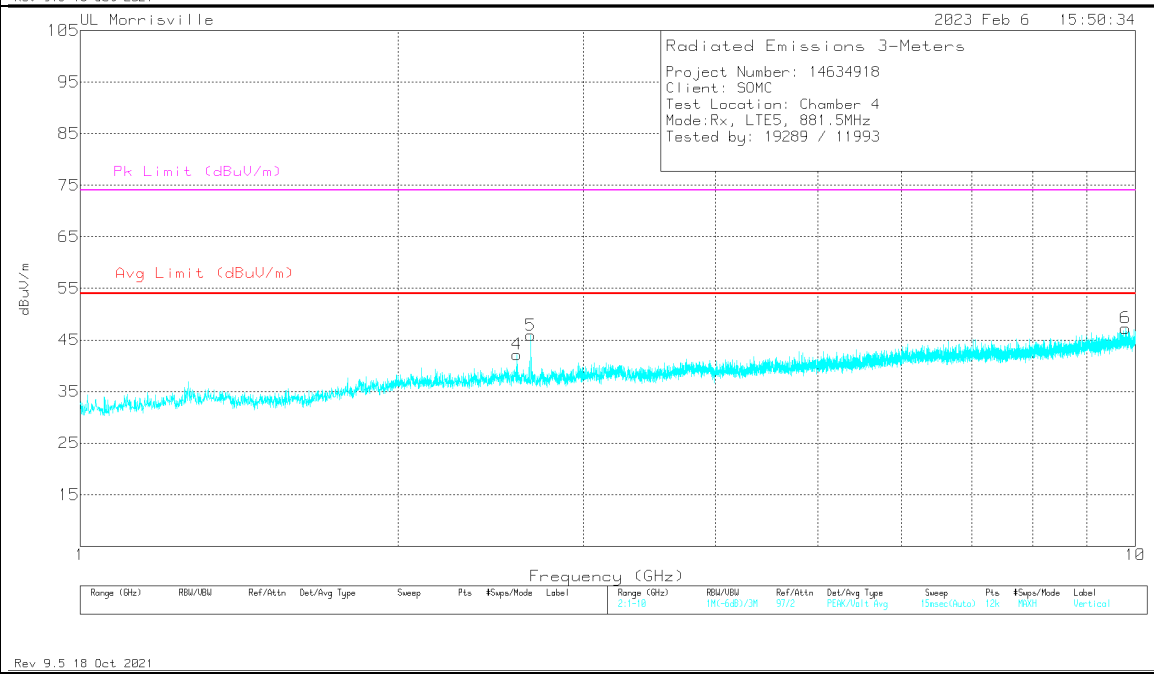
RADIATED EMISSIONS 1000 TO 10,000 MHz – LTE B5 Rx 881.5MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

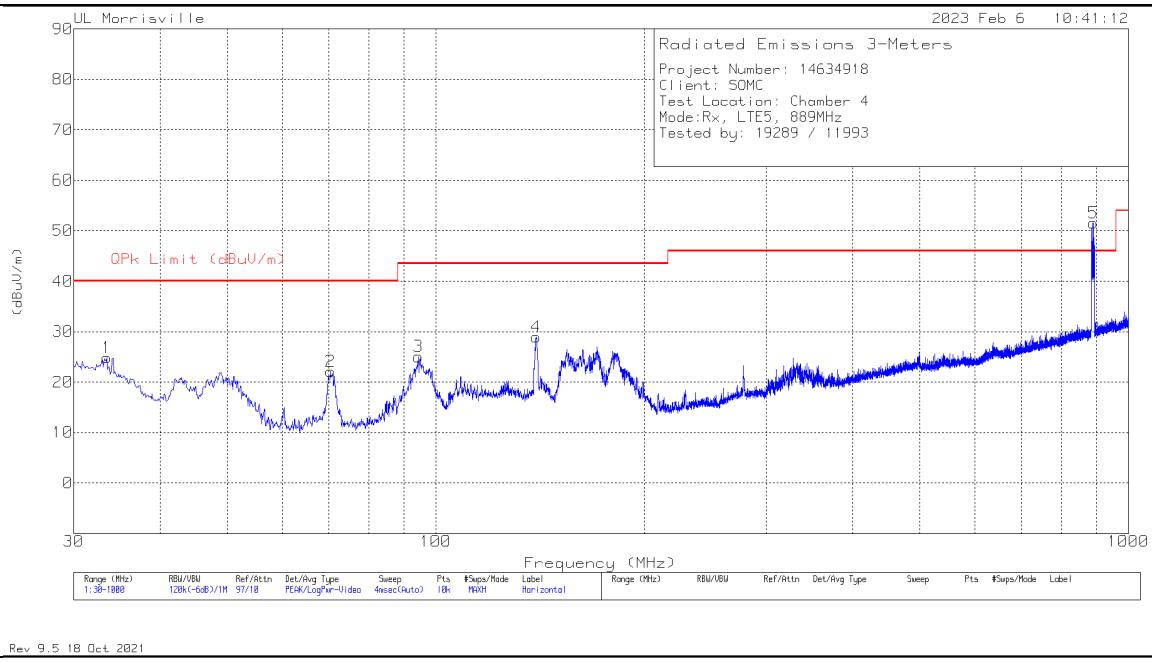
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Avg Limit (dBuV/m)	Margin (dB)	Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	2.5945	45.79	Pk	32.6	-36.2	42.19	54	-11.81	74	-31.81	0-360	100	V
1	2.6155	46.34	Pk	32.5	-36.1	42.74	54	-11.26	74	-31.26	0-360	100	H
5	2.674	49.8	Pk	32.3	-36.2	45.9	54	-8.1	74	-28.1	0-360	100	V
2	2.68675	44.95	Pk	32.2	-36	41.15	54	-12.85	74	-32.85	0-360	100	H
3	9.65125	36.88	Pk	36.7	-26.4	47.18	54	-6.82	74	-26.82	0-360	100	H
6	9.78925	37.1	Pk	36.9	-26.7	47.3	54	-6.7	74	-26.7	0-360	100	V

Pk - Peak detector

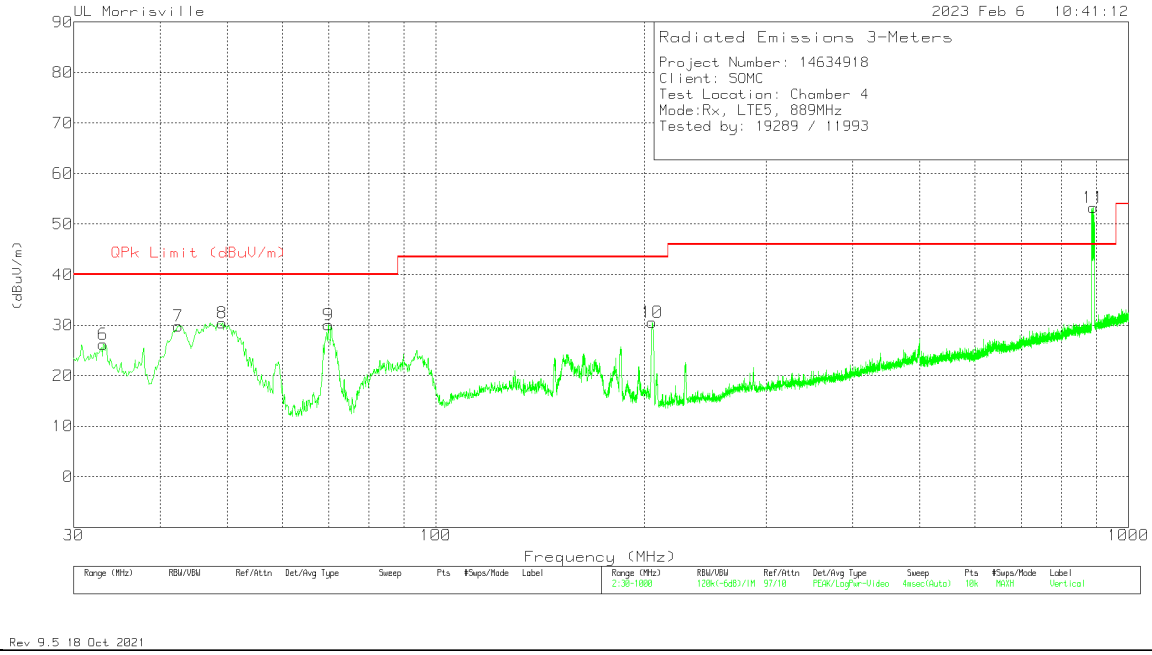
RADIATED EMISSIONS 30 TO 1000 MHz – LTE B5 Rx 889.0MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

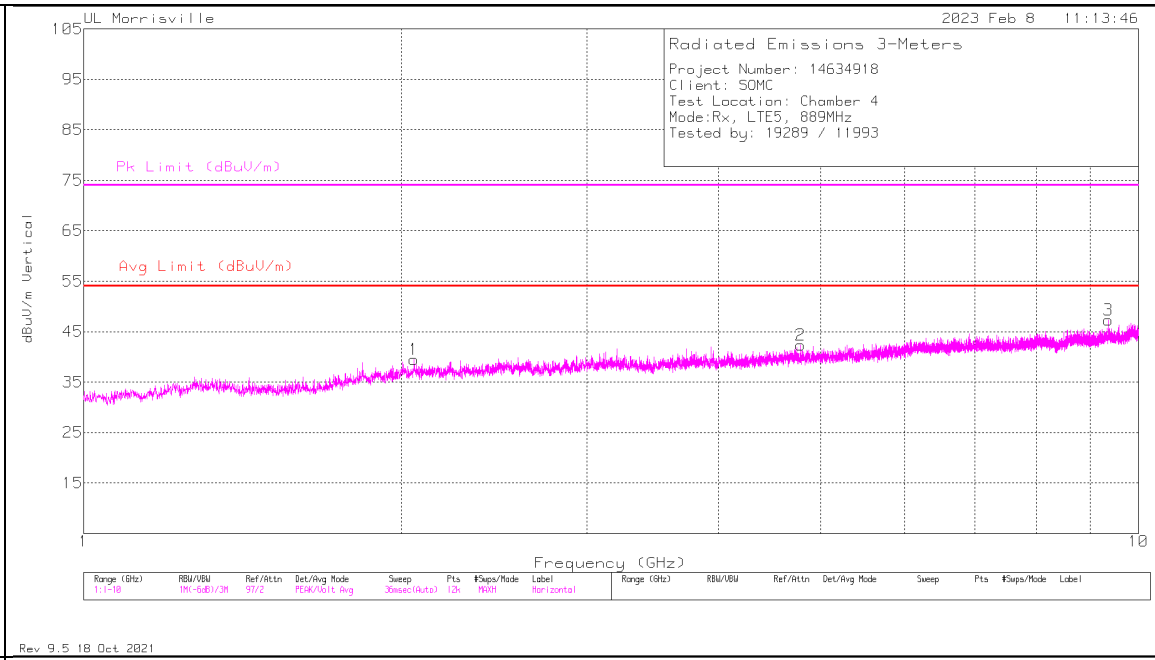
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90629 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	33.104	32.97	Pk	24.9	-31.7	26.17	40	-13.83	0-360	100	V
1	33.492	32.08	Pk	24.6	-31.8	24.88	40	-15.12	0-360	100	H
7	42.513	43.34	Pk	17.9	-31.4	29.84	40	-10.16	0-360	100	V
8	49.109	47.47	Pk	14.4	-31.4	30.47	40	-9.53	0-360	100	V
9	69.964	46.74	Pk	14.4	-31.1	30.04	40	-9.96	0-360	100	V
2	70.449	38.93	Pk	14.4	-31.2	22.13	40	-17.87	0-360	100	H
3	94.311	40.64	Pk	15.2	-30.8	25.04	43.52	-18.48	0-360	100	H
4	139.707	40.19	Pk	19.1	-30.3	28.99	43.52	-14.53	0-360	100	H
10	205.376	43.01	Pk	17.2	-29.6	30.61	43.52	-12.91	0-360	200	V
5^{DL}	888.935	48.97	Pk	28	-25.4	51.57	-	-	0-360	300	H
11^{DL}	889.42	50.73	Pk	28	-25.5	53.23	-	-	0-360	100	V

Pk - Peak detector
DL - Downlink

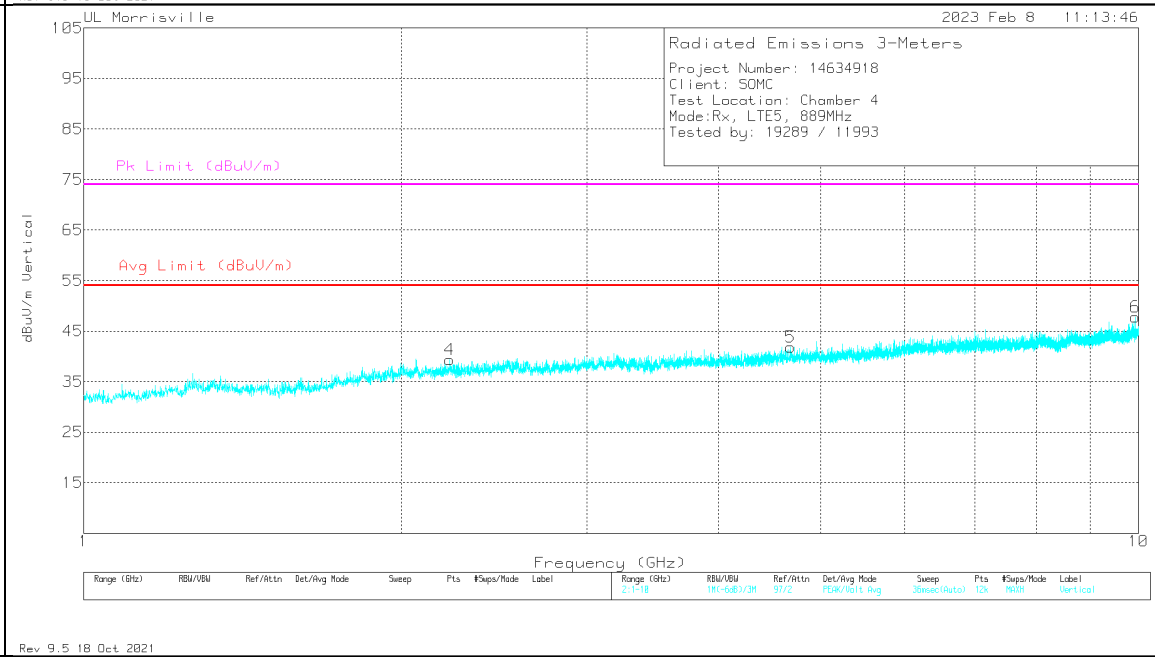
RADIATED EMISSIONS 1000 TO 10,000 MHz – LTE B5 Rx 889.0MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

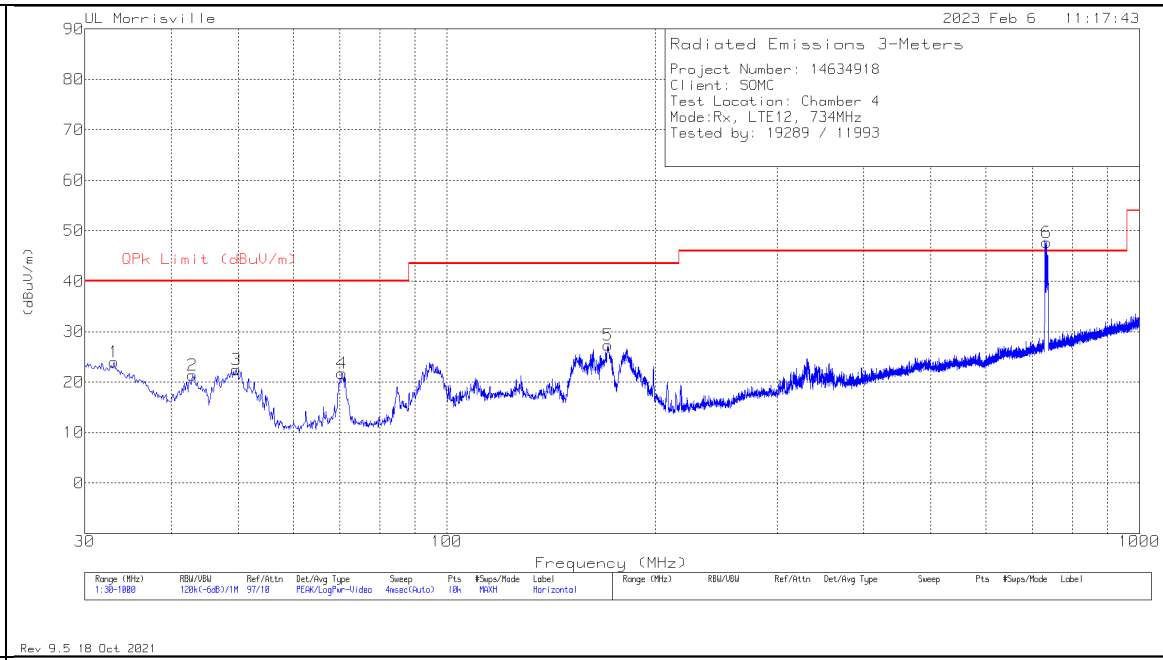
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Avg Limit (dBuV/m)	Margin (dB)	Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.0575	43.87	Pk	32	-36.4	39.47	54	-14.53	74	-34.53	0-360	100	H
4	2.224	43.48	Pk	32	-36.1	39.38	54	-14.62	74	-34.62	0-360	200	V
5	4.6825	40.08	Pk	34	-32.2	41.88	54	-12.12	74	-32.12	0-360	200	V
2	4.78525	40.65	Pk	34	-32.3	42.35	54	-11.65	74	-31.65	0-360	100	H
3	9.36625	37.33	Pk	36.4	-26.4	47.33	54	-6.67	74	-26.67	0-360	100	H
6	9.92575	37.94	Pk	37	-27.1	47.84	54	-6.16	74	-26.16	0-360	200	V

Pk - Peak detector

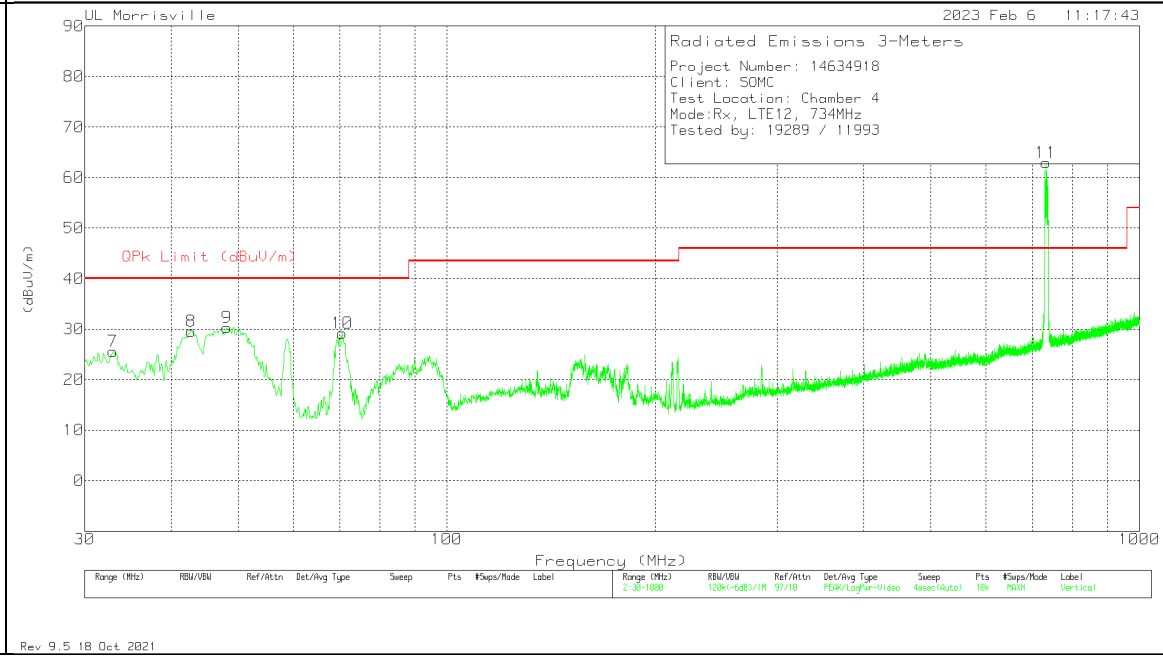
RADIATED EMISSIONS 30 TO 1000 MHz – LTE B12 Rx 734.0MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

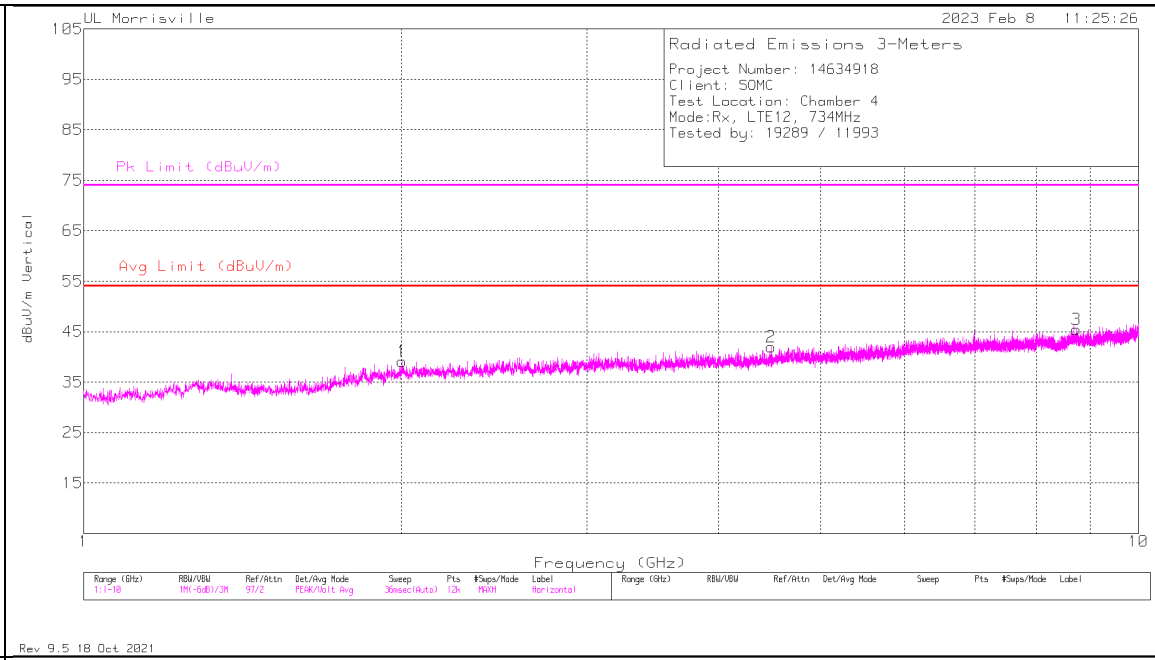
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90629 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7	32.91	32.08	Pk	25.1	-31.6	25.58	40	-14.42	0-360	100	V
1	33.104	30.79	Pk	24.9	-31.7	23.99	40	-16.01	0-360	300	H
8	42.707	43.21	Pk	17.8	-31.4	29.61	40	-10.39	0-360	100	V
2	42.901	35.1	Pk	17.7	-31.4	21.4	40	-18.6	0-360	200	H
9	48.139	47.06	Pk	14.7	-31.4	30.36	40	-9.64	0-360	100	V
3	49.691	39.68	Pk	14.2	-31.4	22.48	40	-17.52	0-360	300	H
4	70.546	38.55	Pk	14.4	-31.2	21.75	40	-18.25	0-360	100	H
10	70.643	45.96	Pk	14.4	-31.2	29.16	40	-10.84	0-360	200	V
5	170.8925	39.29	Pk	17.9	-29.9	27.29	43.52	-16.23	0-360	100	H
11[DL]	733.541	63.22	Pk	26.7	-27	62.92	-	-	0-360	100	V
6[DL]	733.929	48.03	Pk	26.7	-27	47.73	-	-	0-360	100	H

Pk - Peak detector
DL - Downlink

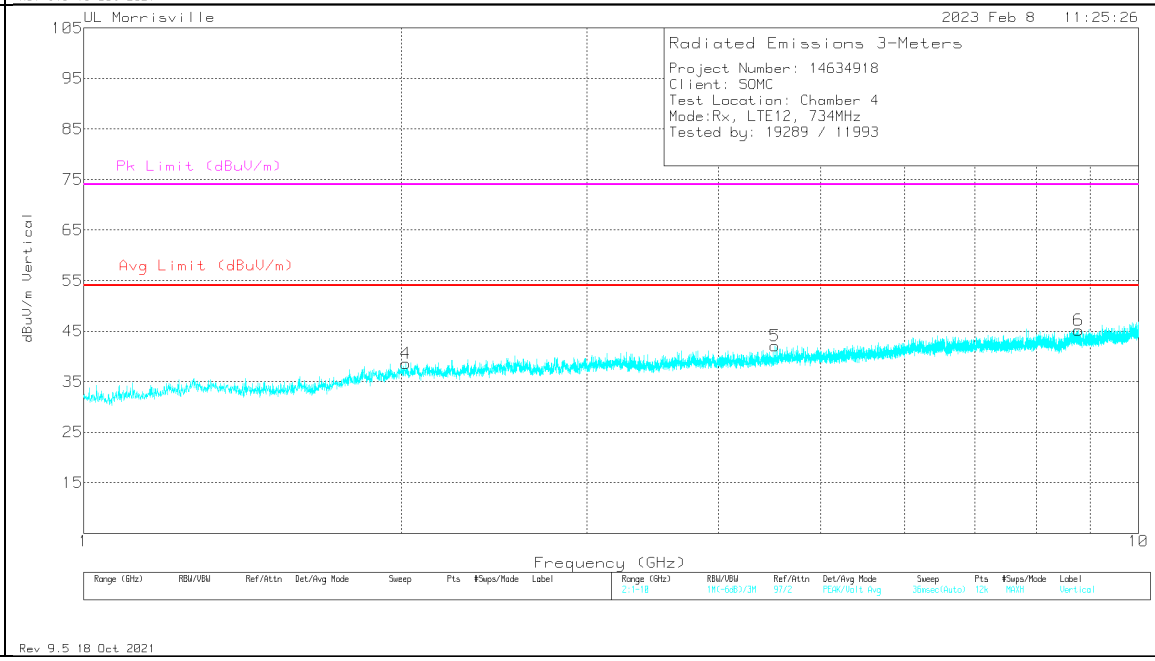
RADIATED EMISSIONS 1000 TO 10,000 MHz – LTE B12 Rx 734.0MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

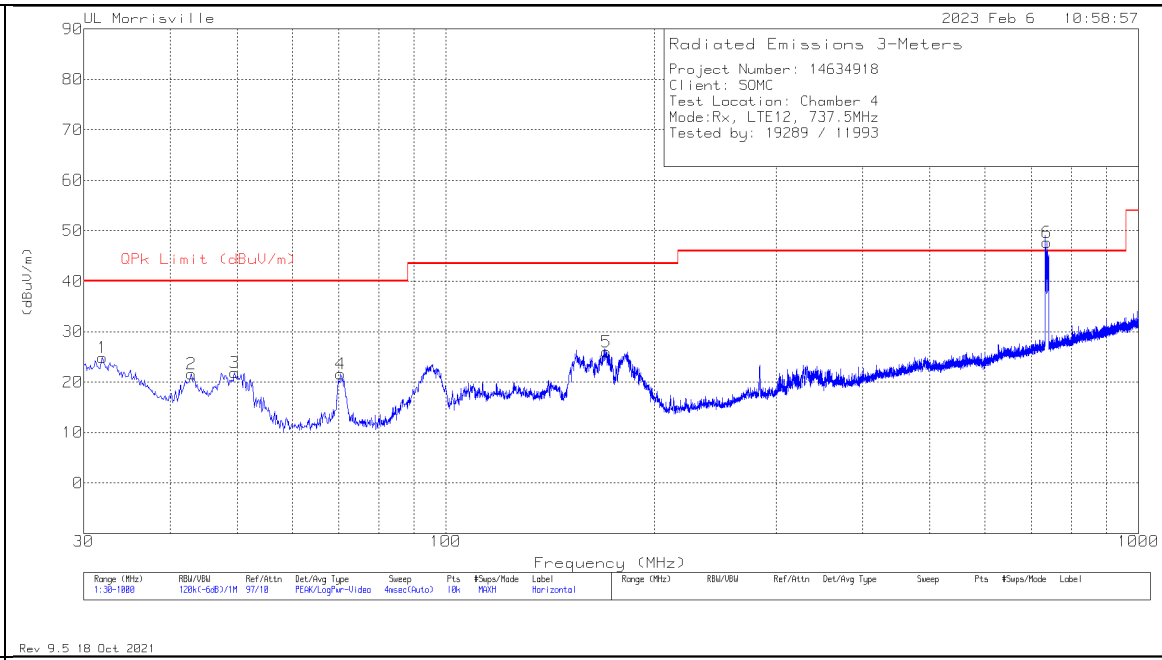
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Avg Limit (dBuV/m)	Margin (dB)	Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.00425	43.52	Pk	31.9	-36.3	39.12	54	-14.88	74	-34.88	0-360	100	H
4	2.02	43.05	Pk	31.9	-36.3	38.65	54	-15.35	74	-35.35	0-360	200	V
2	4.48225	40.31	Pk	33.7	-32	42.01	54	-11.99	74	-31.99	0-360	100	H
5	4.525	40.38	Pk	33.9	-32.2	42.08	54	-11.92	74	-31.92	0-360	200	V
3	8.728	36.48	Pk	35.9	-26.9	45.48	54	-8.52	74	-28.52	0-360	100	H
6	8.7745	35.85	Pk	36	-26.7	45.15	54	-8.85	74	-28.85	0-360	200	V

Pk - Peak detector

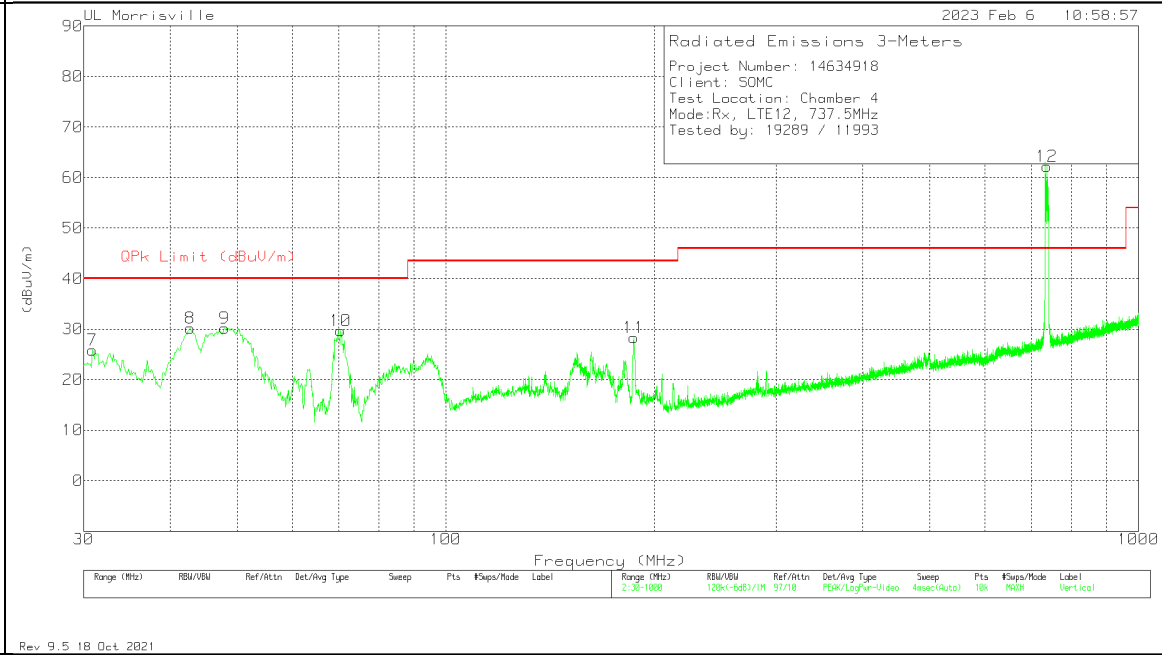
RADIATED EMISSIONS 30 TO 1000 MHz – LTE B12 Rx 737.5MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

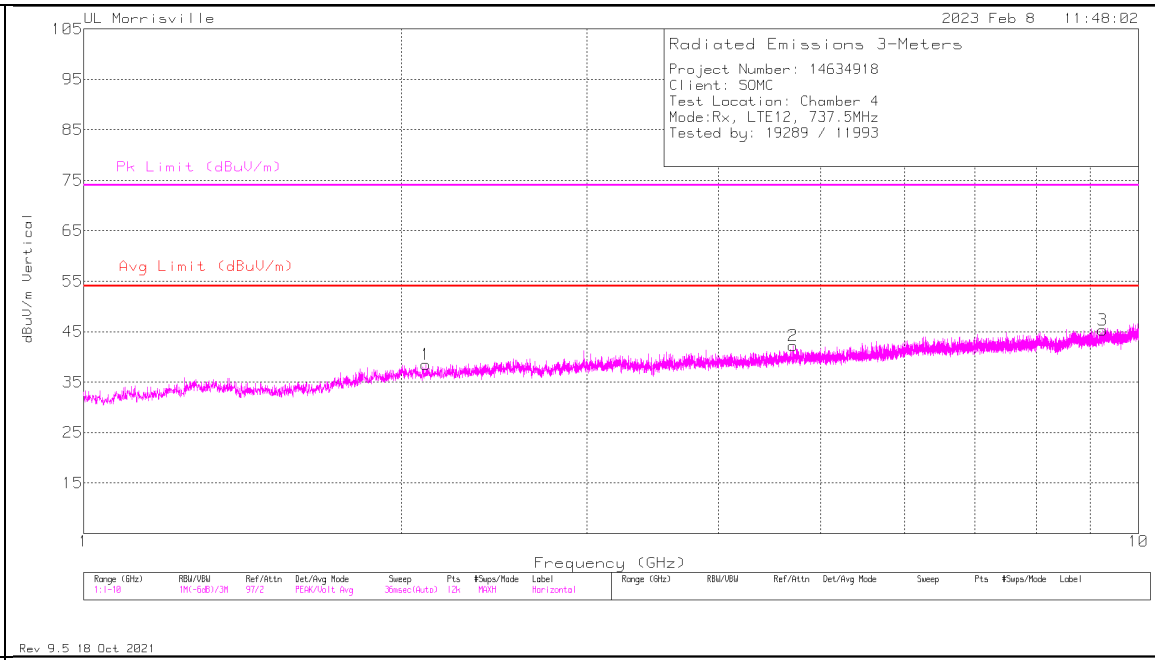
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90629 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7	30.873	31.12	Pk	26.5	-31.8	25.82	40	-14.18	0-360	100	V
1	31.94	30.91	Pk	25.7	-31.8	24.81	40	-15.19	0-360	200	H
8	42.707	43.84	Pk	17.8	-31.4	30.24	40	-9.76	0-360	100	V
2	42.901	35.34	Pk	17.7	-31.4	21.64	40	-18.36	0-360	200	H
9	47.945	46.84	Pk	14.8	-31.4	30.24	40	-9.76	0-360	100	V
3	49.594	39.09	Pk	14.2	-31.4	21.89	40	-18.11	0-360	300	H
4	70.449	38.46	Pk	14.4	-31.2	21.66	40	-18.34	0-360	100	H
10	70.449	46.48	Pk	14.4	-31.2	29.68	40	-10.32	0-360	200	V
5	170.456	37.94	Pk	18	-30	25.94	43.52	-17.58	0-360	100	H
11	186.849	40.86	Pk	17.4	-29.9	28.36	43.52	-15.16	0-360	100	V
12^{DL}	737.615	62.37	Pk	26.7	-26.9	62.17	-	-	0-360	100	V
6^{DL}	737.809	47.89	Pk	26.7	-26.9	47.69	-	-	0-360	100	H

Pk - Peak detector
DL - Downlink

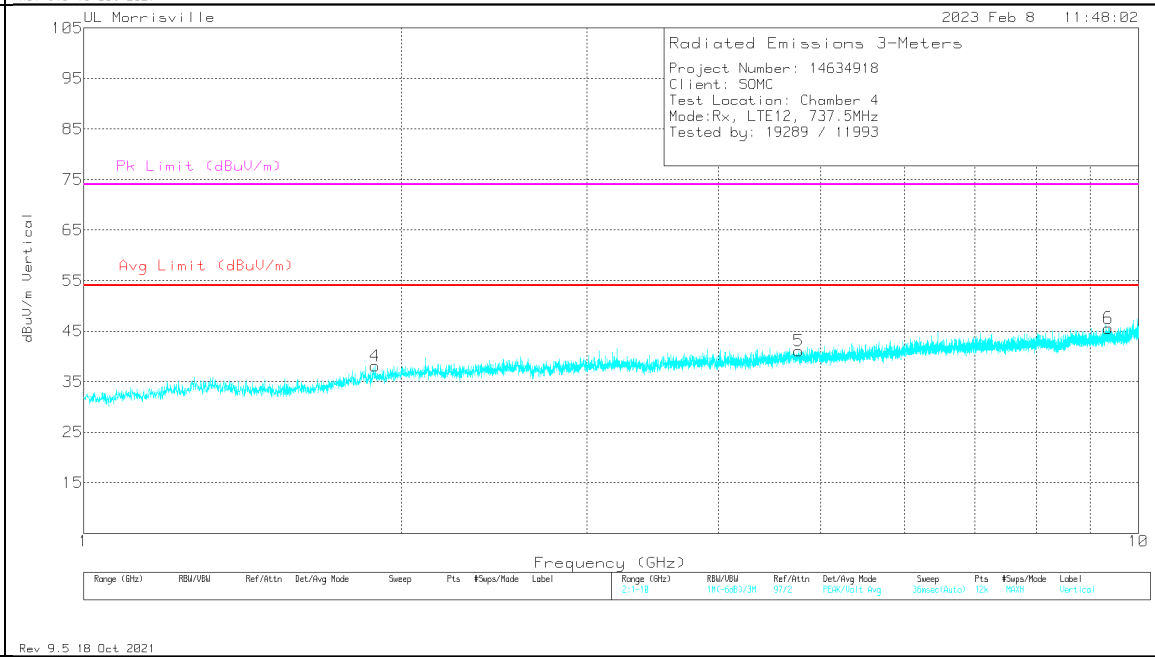
RADIATED EMISSIONS 1000 TO 10,000 MHz – LTE B12 Rx 737.5MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

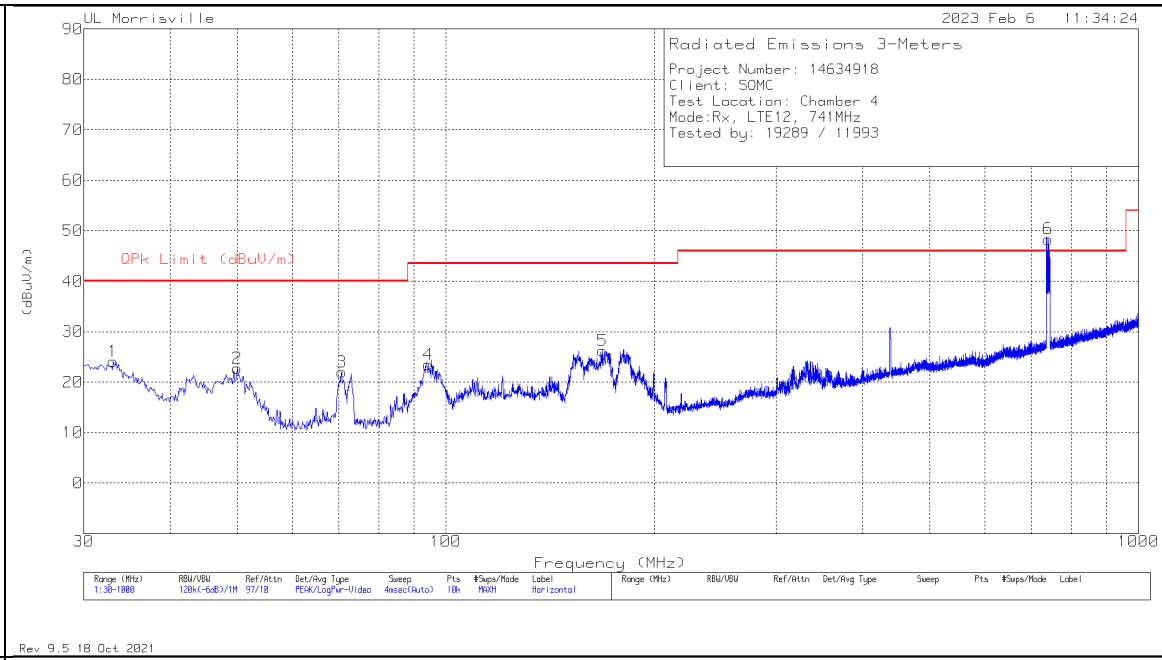
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Avg Limit (dBuV/m)	Margin (dB)	Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	1.89025	43.02	Pk	31.3	-36.2	38.12	54	-15.88	74	-35.88	0-360	200	V
1	2.11	42.84	Pk	31.9	-36.3	38.44	54	-15.56	74	-35.56	0-360	100	H
2	4.70275	40.55	Pk	34	-32.3	42.25	54	-11.75	74	-31.75	0-360	100	H
5	4.762	39.32	Pk	34	-32.2	41.12	54	-12.88	74	-32.88	0-360	200	V
3	9.2485	35.45	Pk	36.3	-26.4	45.35	54	-8.65	74	-28.65	0-360	100	H
6	9.3625	35.62	Pk	36.4	-26.4	45.62	54	-8.38	74	-28.38	0-360	200	V

Pk - Peak detector

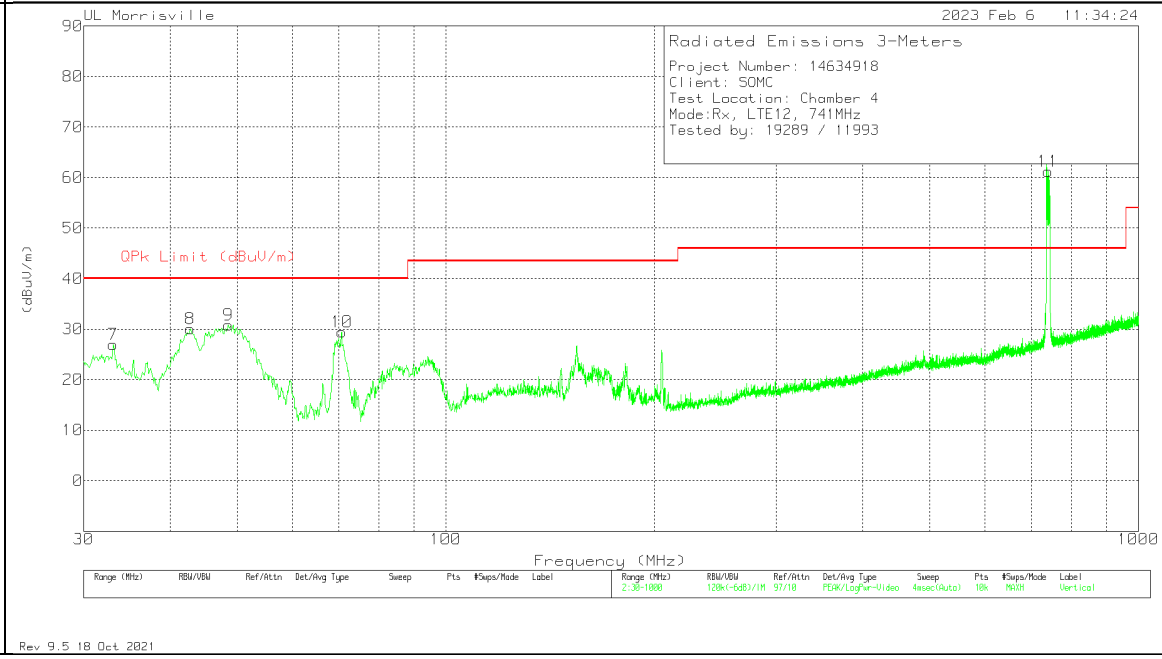
RADIATED EMISSIONS 30 TO 1000 MHz – LTE B12 Rx 741.0MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

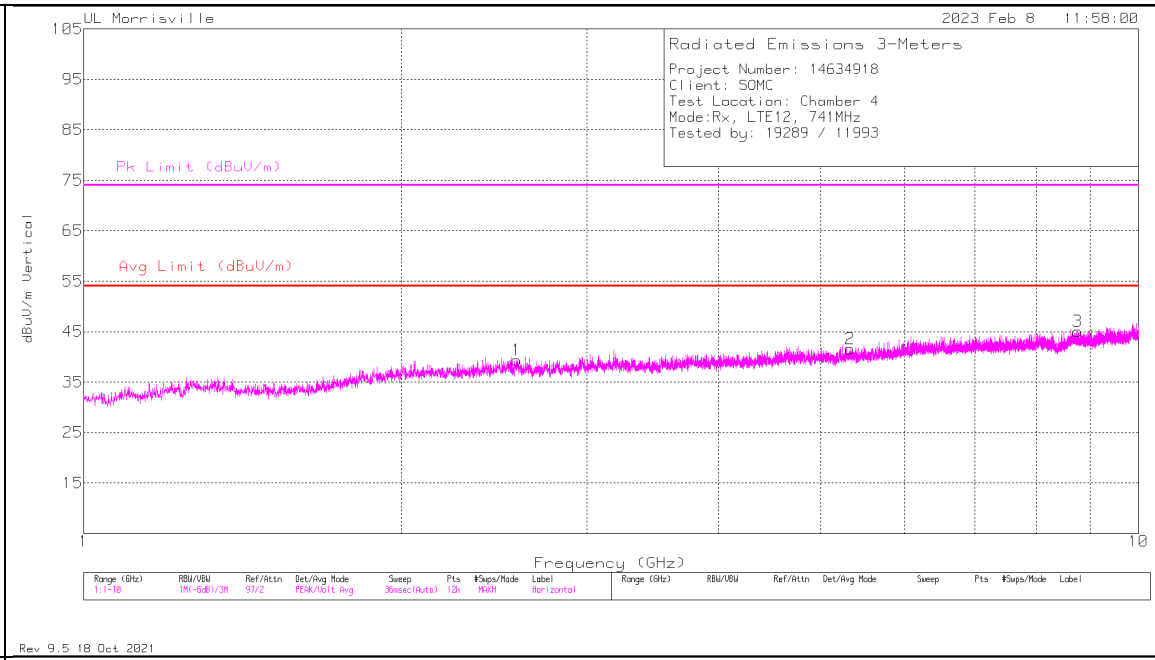
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90629 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	33.104	30.87	Pk	24.9	-31.7	24.07	40	-15.93	0-360	300	H
7	33.104	33.81	Pk	24.9	-31.7	27.01	40	-12.99	0-360	100	V
8	42.707	43.62	Pk	17.8	-31.4	30.02	40	-9.98	0-360	100	V
9	48.527	47.68	Pk	14.6	-31.5	30.78	40	-9.22	0-360	100	V
2	49.982	39.99	Pk	14.1	-31.4	22.69	40	-17.31	0-360	300	H
3	70.74	38.77	Pk	14.4	-31.2	21.97	40	-18.03	0-360	100	H
10	70.74	46.28	Pk	14.4	-31.2	29.48	40	-10.52	0-360	200	V
4	94.408	39	Pk	15.3	-30.8	23.5	43.52	-20.02	0-360	200	H
5	168.225	38.27	Pk	18.1	-30.2	26.17	43.52	-17.35	0-360	100	H
11^{DL}	740.622	61.39	Pk	26.7	-26.9	61.19	-	-	0-360	100	V
6^{DL}	740.816	48.58	Pk	26.7	-26.9	48.38	-	-	0-360	200	H

Pk - Peak detector
DL - Downlink

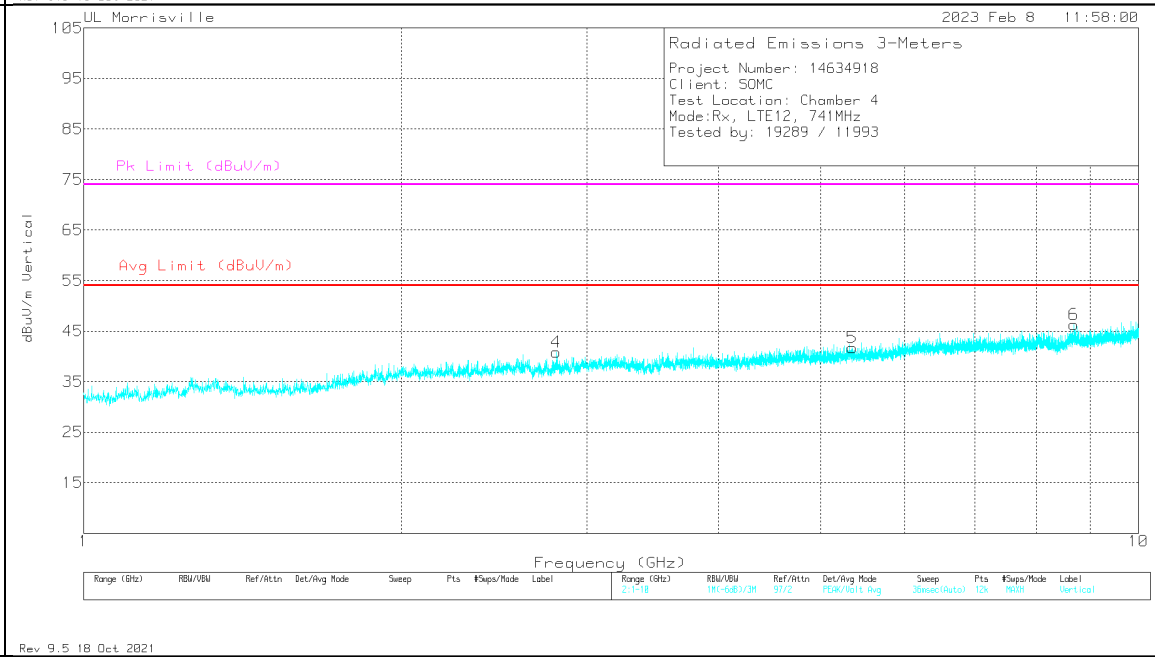
RADIATED EMISSIONS 1000 TO 10,000 MHz – LTE B12 Rx 741.0MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

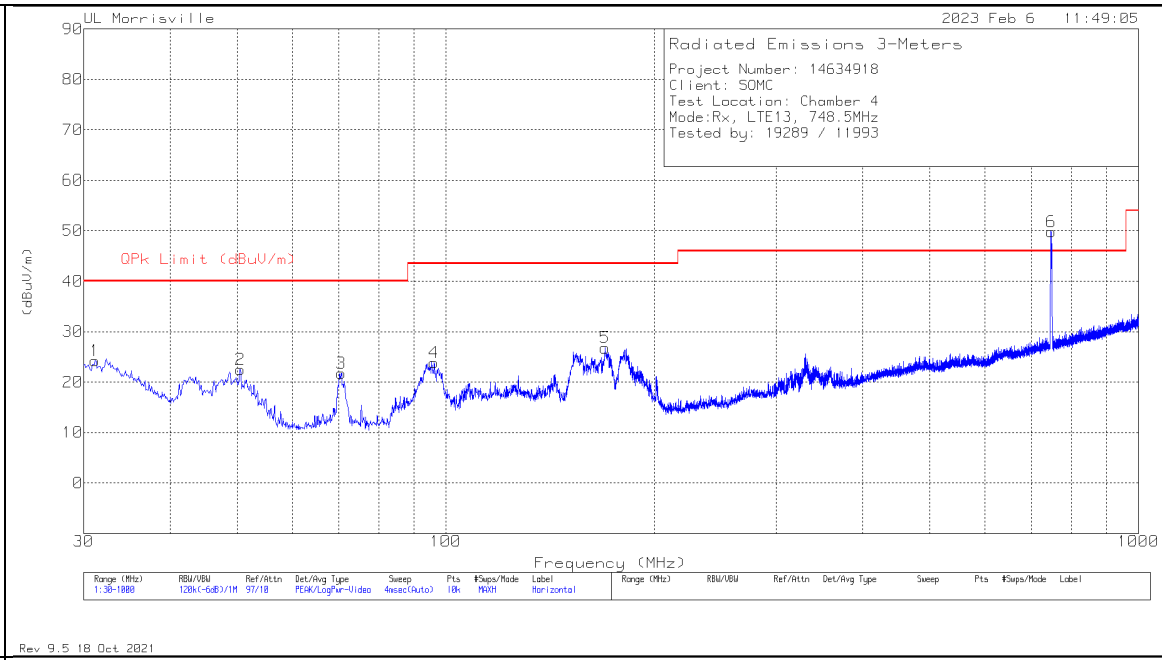
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Avg Limit (dBuV/m)	Margin (dB)	Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.572	42.82	Pk	32.7	-36.2	39.32	54	-14.68	74	-34.68	0-360	100	H
4	2.80675	44.14	Pk	32.6	-35.9	40.84	54	-13.16	74	-33.16	0-360	200	V
2	5.32975	38.99	Pk	34.5	-31.9	41.59	54	-12.41	74	-32.41	0-360	100	H
5	5.3545	39.36	Pk	34.5	-32.1	41.76	54	-12.24	74	-32.24	0-360	200	V
6	8.68675	37.16	Pk	35.9	-26.8	46.26	54	-7.74	74	-27.74	0-360	200	V
3	8.761	35.92	Pk	36	-26.8	45.12	54	-8.88	74	-28.88	0-360	100	H

Pk - Peak detector

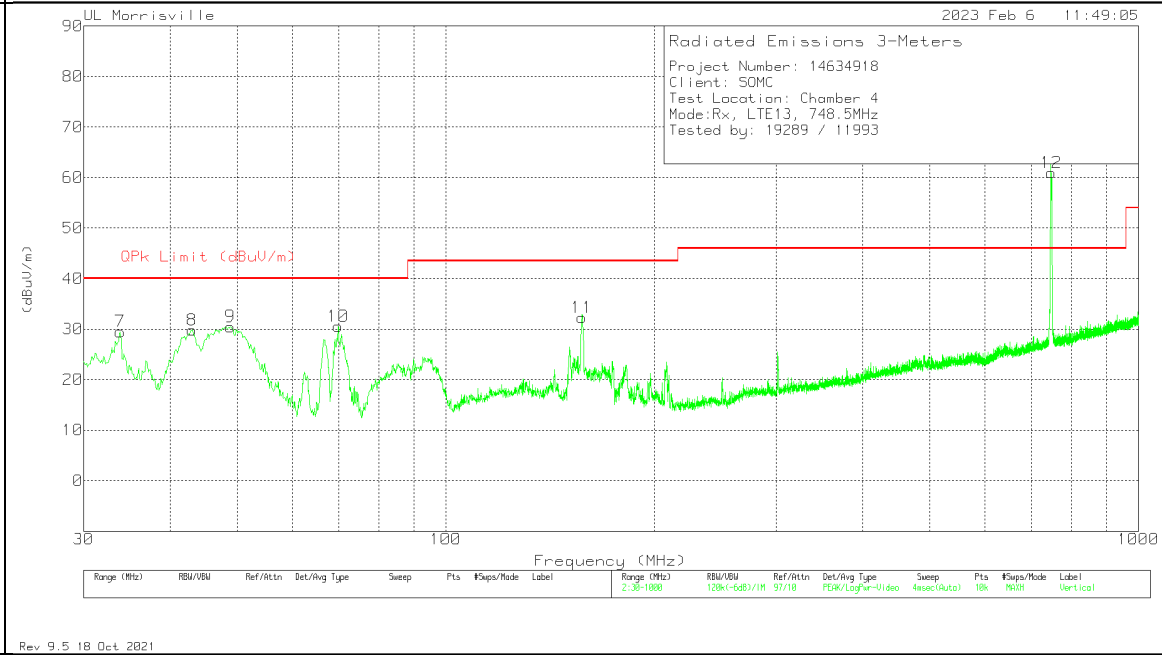
RADIATED EMISSIONS 30 TO 1000 MHz – LTE B13 Rx 748.5MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

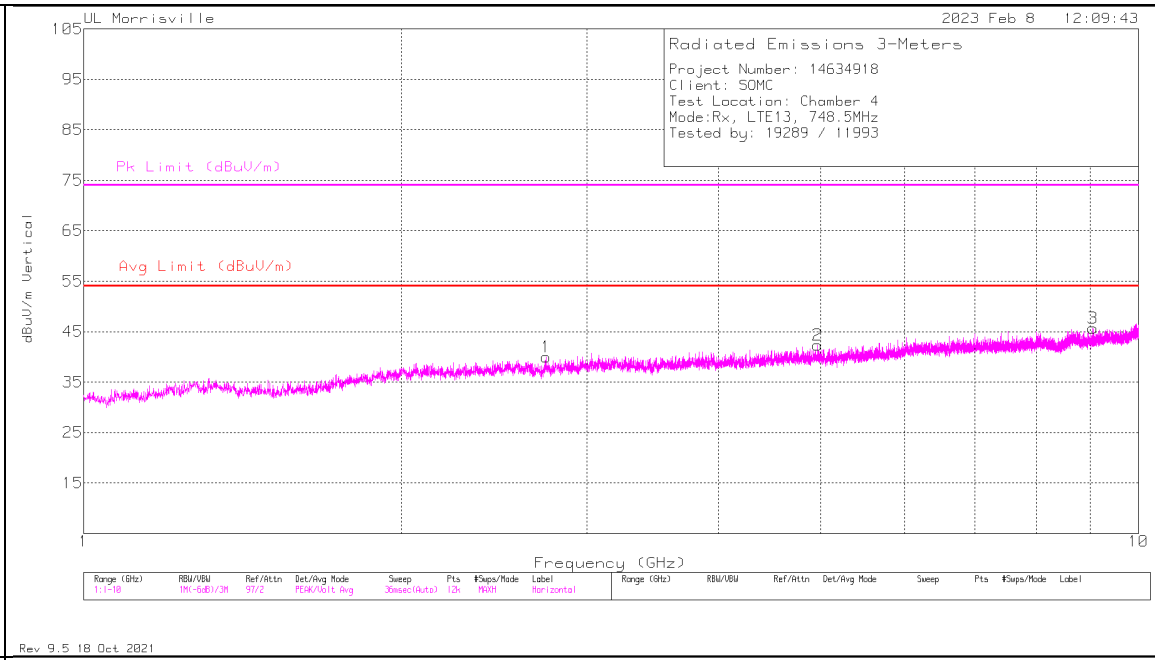
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90629 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	31.164	29.75	Pk	26.3	-31.8	24.25	40	-15.75	0-360	200	H
7	33.88	37.01	Pk	24.3	-31.8	29.51	40	-10.49	0-360	100	V
8	42.998	43.62	Pk	17.6	-31.4	29.82	40	-10.18	0-360	100	V
9	48.818	47.5	Pk	14.5	-31.5	30.5	40	-9.5	0-360	100	V
2	50.467	39.91	Pk	14	-31.4	22.51	40	-17.49	0-360	300	H
10	69.867	47.21	Pk	14.4	-31.1	30.51	40	-9.49	0-360	100	V
3	70.643	38.58	Pk	14.4	-31.2	21.78	40	-18.22	0-360	100	H
4	96.154	38.55	Pk	16.1	-30.8	23.85	43.52	-19.67	0-360	100	H
11	157.07	43.84	Pk	18.6	-30.1	32.34	43.52	-11.18	0-360	200	V
5	169.68	38.88	Pk	18	-30.1	26.78	43.52	-16.74	0-360	100	H
6^{DL}	748.091	50.01	Pk	26.8	-27	49.81	-	-	0-360	200	H
12^{DL}	748.285	61.13	Pk	26.8	-26.9	61.03	-	-	0-360	100	V

Pk - Peak detector
DL - Downlink

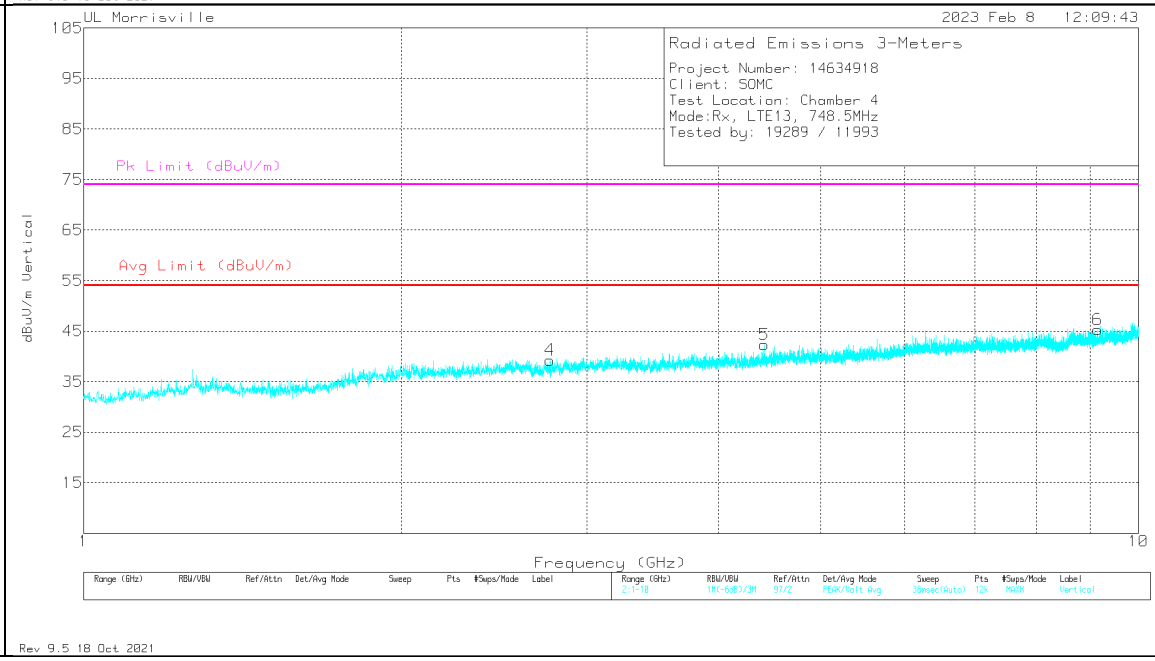
RADIATED EMISSIONS 1000 TO 10,000 MHz – LTE B13 Rx 748.5MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

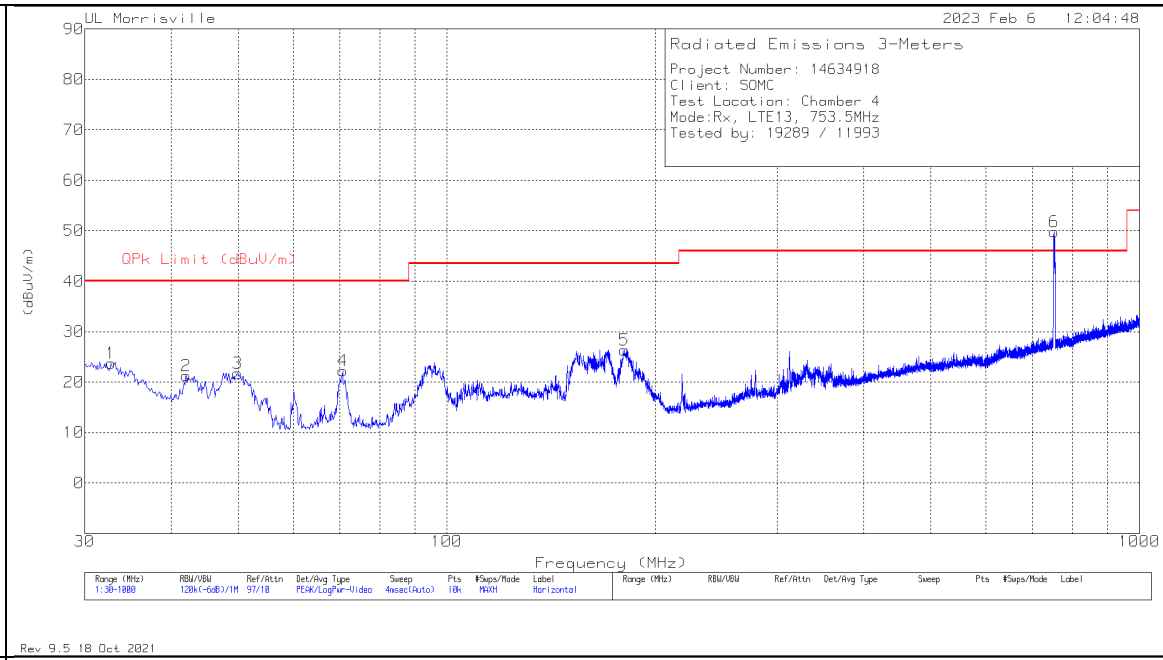
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Avg Limit (dBuV/m)	Margin (dB)	Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.74525	43.59	Pk	32.4	-36	39.99	54	-14.01	74	-34.01	0-360	100	H
4	2.7655	42.89	Pk	32.5	-36.1	39.29	54	-14.71	74	-34.71	0-360	200	V
5	4.42075	40.92	Pk	33.7	-32.3	42.32	54	-11.68	74	-31.68	0-360	200	V
2	4.9615	40.5	Pk	34	-32.2	42.3	54	-11.7	74	-31.7	0-360	100	H
3	9.055	36.09	Pk	36.1	-26.5	45.69	54	-8.31	74	-28.31	0-360	100	H
6	9.1435	35.63	Pk	36.2	-26.5	45.33	54	-8.67	74	-28.67	0-360	200	V

Pk - Peak detector

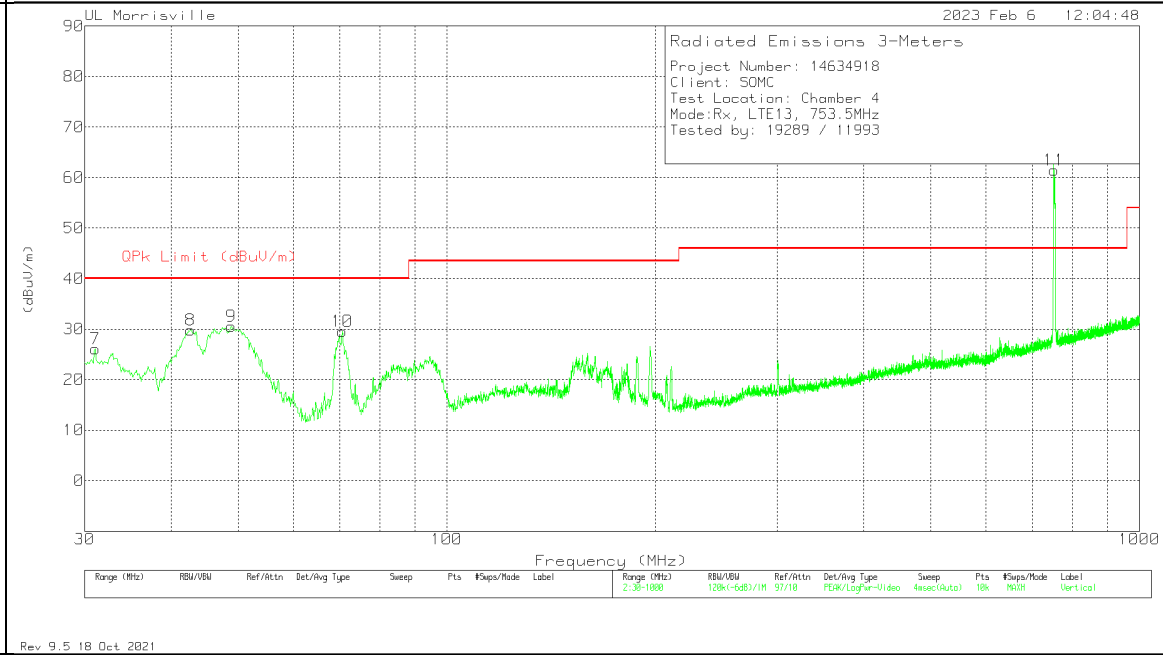
RADIATED EMISSIONS 30 TO 1000 MHz – LTE B13 Rx 753.5MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

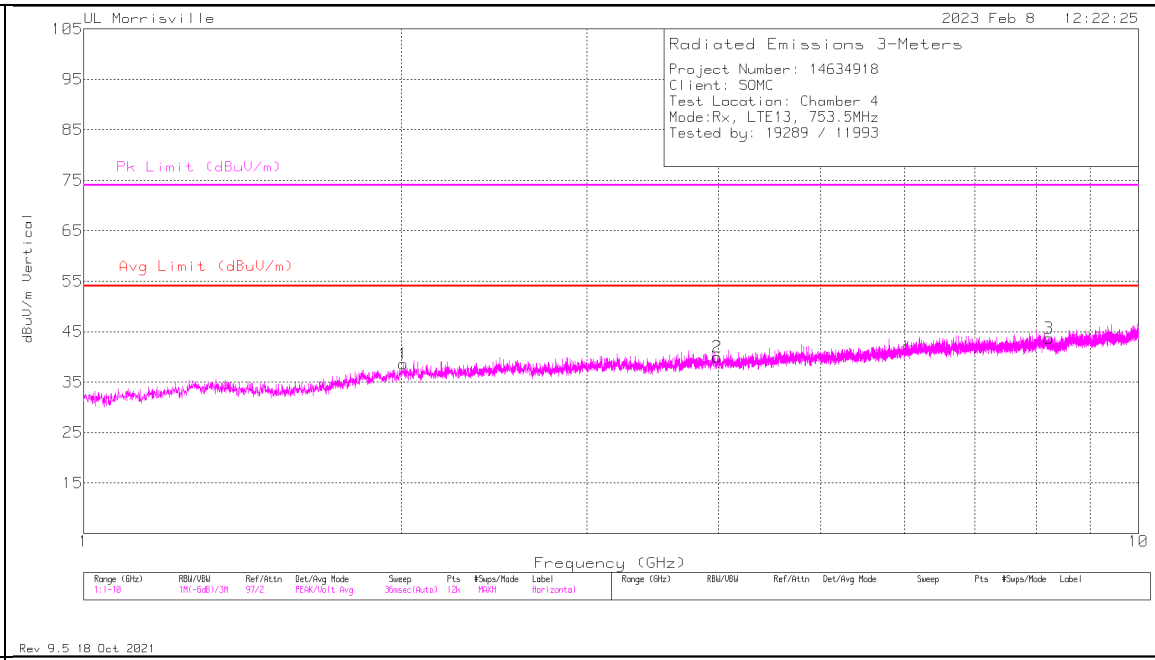
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	90629 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7	31.067	31.47	Pk	26.4	-31.8	26.07	40	-13.93	0-360	100	V
1	32.716	30.19	Pk	25.2	-31.7	23.69	40	-16.31	0-360	200	H
2	42.028	34.38	Pk	18.3	-31.4	21.28	40	-18.72	0-360	300	H
8	42.61	43.37	Pk	17.9	-31.4	29.87	40	-10.13	0-360	100	V
9	48.818	47.52	Pk	14.5	-31.5	30.52	40	-9.48	0-360	100	V
3	49.885	38.99	Pk	14.1	-31.4	21.69	40	-18.31	0-360	300	H
10	70.643	46.42	Pk	14.4	-31.2	29.62	40	-10.38	0-360	200	V
4	70.74	38.99	Pk	14.4	-31.2	22.19	40	-17.81	0-360	100	H
5	180.447	38.97	Pk	17.4	-30	26.37	43.52	-17.15	0-360	100	H
6^{DL}	753.814	49.91	Pk	26.8	-26.9	49.81	-	-	0-360	200	H
11^{DL}	753.814	61.62	Pk	26.8	-26.9	61.52	-	-	0-360	100	V

Pk - Peak detector
DL - Downlink

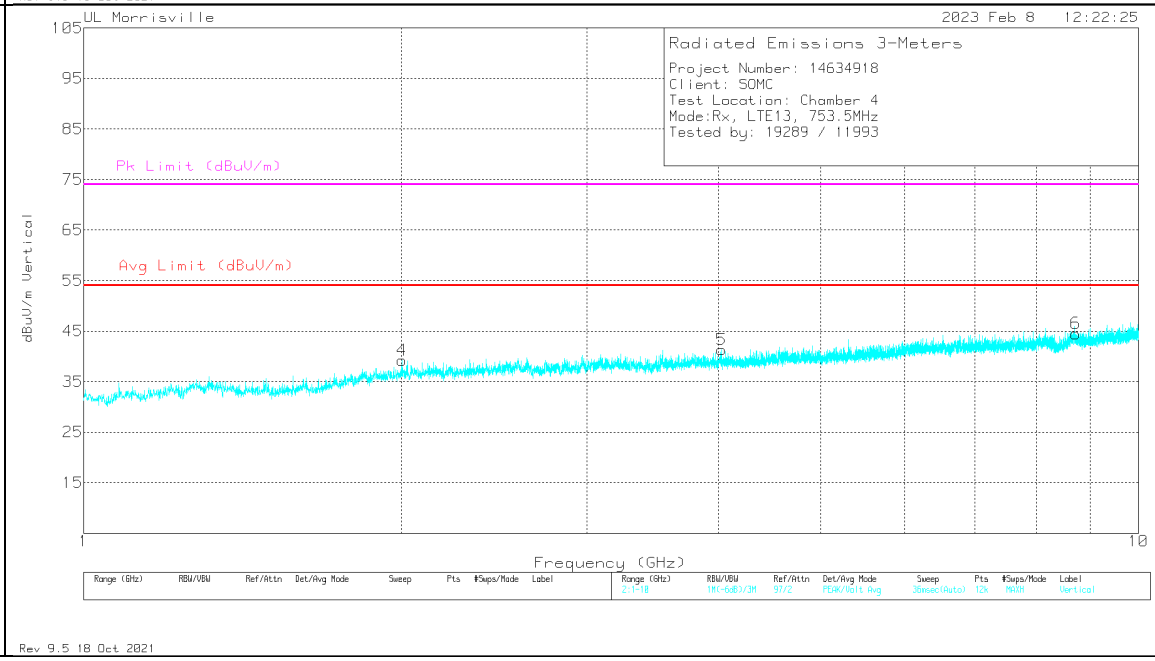
RADIATED EMISSIONS 1000 TO 10,000 MHz – LTE B13 Rx 753.5MHz

Radiated Emissions Graph

HORIZONTAL



VERTICAL



Radiated Emissions Data Points

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Gain/Loss (dB)	Corrected Reading dBuV/m	Avg Limit (dBuV/m)	Margin (dB)	Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	2.00275	43.61	Pk	31.9	-36.3	39.21	54	-14.79	74	-34.79	0-360	200	V
1	2.0095	43.03	Pk	31.9	-36.3	38.63	54	-15.37	74	-35.37	0-360	100	H
2	3.98575	40.06	Pk	33.4	-33.5	39.96	54	-14.04	74	-34.04	0-360	100	H
5	4.024	41.2	Pk	33.4	-33.3	41.3	54	-12.7	74	-32.7	0-360	200	V
3	8.21875	35.89	Pk	35.7	-27.9	43.69	54	-10.31	74	-30.31	0-360	100	H
6	8.716	35.51	Pk	35.9	-26.9	44.51	54	-9.49	74	-29.49	0-360	200	V

Pk - Peak detector

Appendix A

Facilities, Accreditations and Authorizations

UL LLC is accredited by A2LA, certification # 0751.06, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☐	Building: 12 Laboratory Dr RTP, NC 27709, U.S.A	US0067	2180C	825374
☒	Building: 2800 Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A		27265	

END OF TEST REPORT